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College

1898-99

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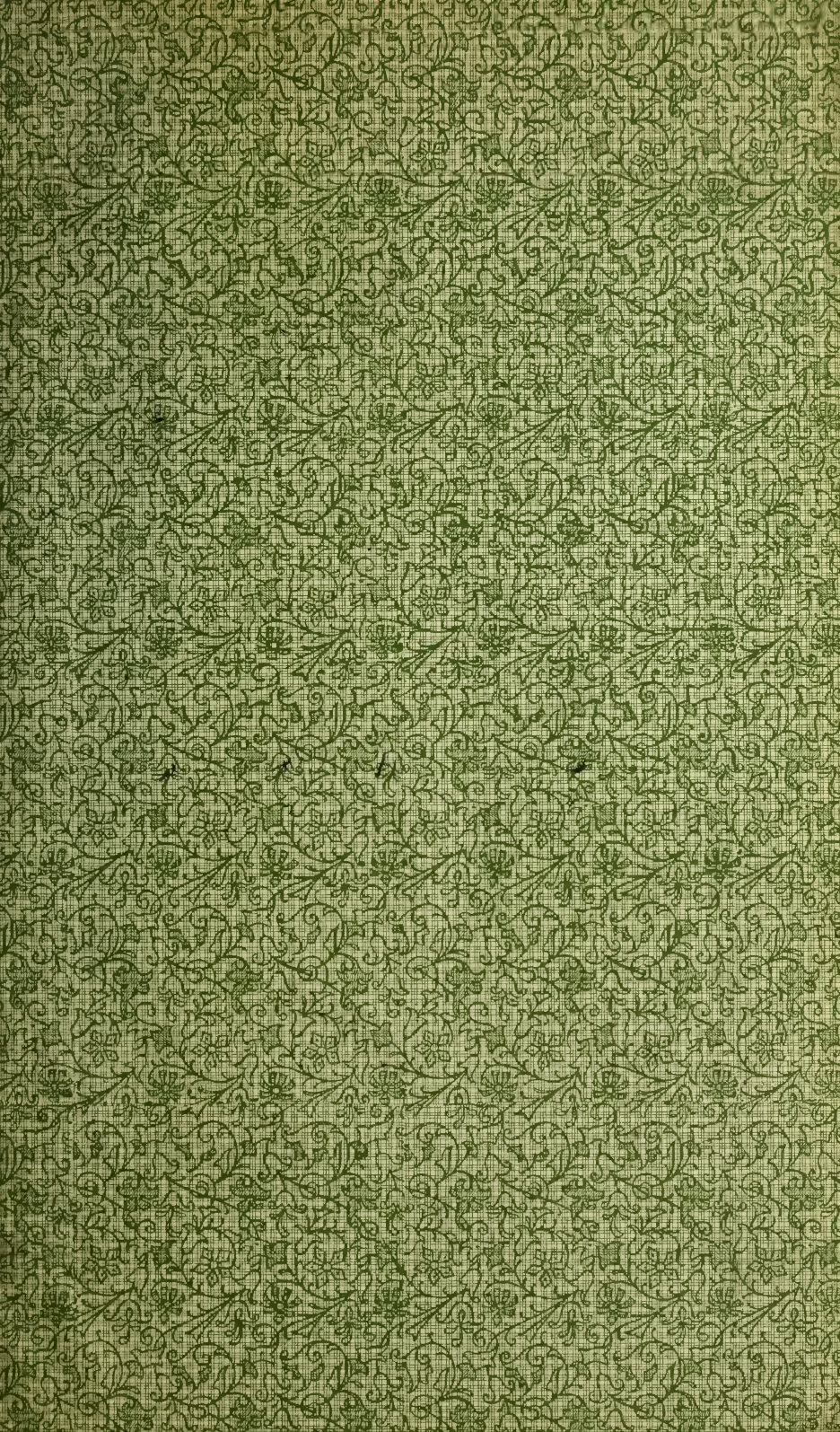
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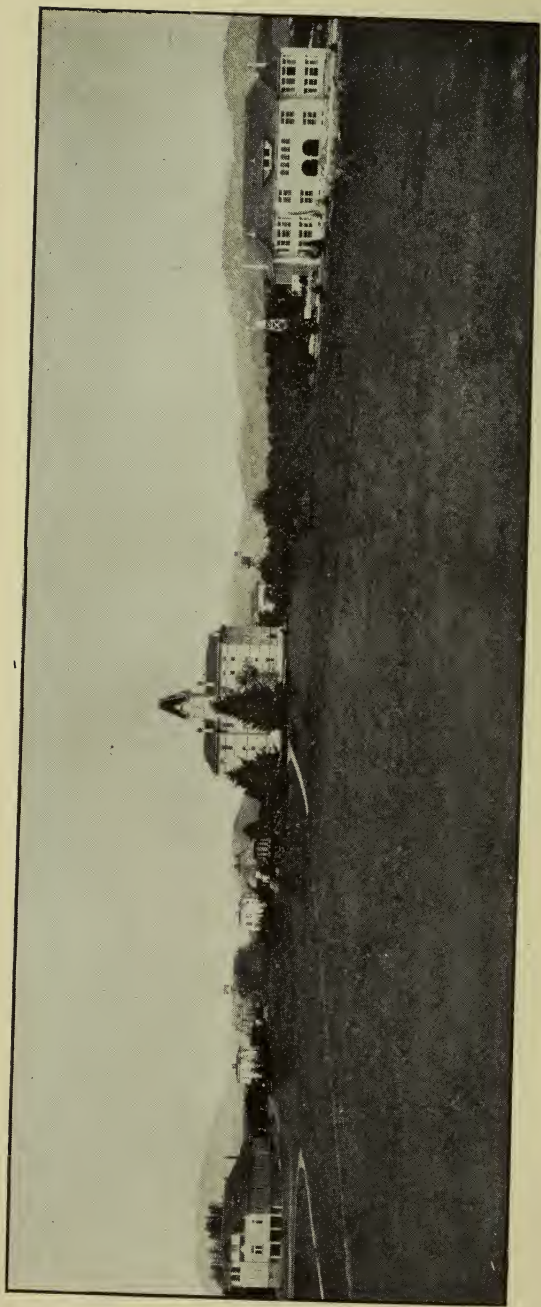
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ANNUAL CATALOGUE

OF THE

AGRICULTURAL COLLEGE

OF THE

STATE OF OREGON

FOR

1898=1899.

AND

ANNOUNCEMENTS FOR 1899=1900.

Corvallis, Oregon.

CALENDAR--1899-'00.

SEPTEMBER.

S.	M.	T.	W.	T.	F.	S.
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3	4	5	6	7	8	9
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OCTOBER.

S.	M.	T.	W.	T.	F.	S.
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NOVEMBER.

S.	M.	T.	W.	T.	F.	S.
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DECEMBER.

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JANUARY.

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FEBRUARY.

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MARCH.

S.	M.	T.	W.	T.	F.	S.
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APRIL.

S.	M.	T.	W.	T.	F.	S.
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MAY.

S.	M.	T.	W.	T.	F.	S.
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JUNE.

S.	M.	T.	W.	T.	F.	S.
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JULY.

S.	M.	T.	W.	T.	F.	S.
...
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22	23	24	25	26	27	28
29	30	31

AUGUST.

S.	M.	T.	W.	T.	F.	S.
...	1	2	3	4
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12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	...
...

ANNOUNCEMENTS.

FALL TERM.

Entrance Examination.....Tuesday, September 19, 1899
Matriculation of Students.....Wednesday, September 20, 1899.
Work of the Term begins.....Thursday, September 21, 1899.
Thanksgiving Holidays.....Thursday and Friday, Nov. 30 and Dec. 1, 1899.
Term closes.....Thursday, December 21, 1899.
Winter Vacation begins.....Friday, December 22, 1899.
Winter Vacation closesTuesday, January 2, 1900.

WINTER TERM.

Term begins.....Wednesday, January 3, 1900.
Holiday.....Thursday, February 22, 1900.
Winter term closes.....Thursday, March 29, 1900.

SPRING TERM.

Term begins.....Thursday, April 5, 1900.
Decoration Day (holiday).....Wednesday, May 30, 1900.
Baccalaureate Sermon.....Sunday, June 17, 1900.
Commencement Day.....Wednesday, June 20, 1900.

Examinations will be held at the close of each term.

The standings of students will be sent to the parents or guardians on application.

NOTE.—On Decoration Day cadets will turn out in full force.

BOARD OF REGENTS OF THE STATE AGRICULTURAL COLLEGE.

HON. J. T. APPERSON, <i>President</i>	Oregon City, Oregon.
HON. WILLIAM E. YATES, <i>Secretary</i>	Corvallis, Oregon.
HON. J. L. WEATHERFORD, <i>Treasurer</i>	Albany, Oregon.
HON. T. T. GEER, <i>Governor</i>	Salem, Oregon.
HON. F. I. DUNBAR, <i>Secretary of State</i>	Salem, Oregon.
HON. J. H. ACKERMAN, <i>State Supt. of Public Instruction</i>	Salem, Oregon.
HON. WILLIAM M. HILLEARY, <i>Master of State Grange</i>	Turner, Oregon.
HON. BENTON KILLIN.....	Portland, Oregon.
HON. W. P. KEADY..	Portland, Oregon.
HON. J. M. CHURCH	La Grande, Oregon.
B. S. PAGUE, LLB. M. A.....	Portland, Oregon.
HON. JOHN D. DALY.....	Corvallis, Oregon.
HON. B. F. IRVINE	Corvallis, Oregon.

EXECUTIVE COMMITTEE.

HON. BENTON KILLIN, <i>Chairman</i>	Portland, Oregon.
HON. J. T. APPERSON.....	Oregon City, Oregon.
HON. W. P. KEADY.....	Portland, Oregon.
HON. WILLIAM M. HILLEARY.....	Turner, Oregon.
HON. WILLIAM E. YATES.....	Corvallis, Oregon.

Standing Committees of Board of Regents.

EXECUTIVE COMMITTEE—Benton Killin, *Chairman*; J. T. Apperson, W. M. Hilleary, W. P. Keady, Wm. E. Yates.

FINANCE COMMITTEE—Benton Killin, J. M. Church, W. M. Hilleary.

AGRICULTURE AND CHEMISTRY—Benton Killin, W. M. Hilleary.

HORTICULTURE AND ENTOMOLOGY—B. F. Irvine, J. M. Church.

MECHANICS AND HOUSEHOLD SCIENCE—J. K. Weatherford, W. P. Keady, John D. Daly.

LITERARY AND LIBRARY—B. S. Pague, B. F. Irvine.

ADVERTISING AND PRINTING—W. P. Keady, Wm. E. Yates.

BUILDINGS AND GROUNDS—Wm. E. Yates, J. M. Church, B. S. Pague.

INSTITUTES—J. K. Weatherford, Wm. E. Yates.

COMMITTEE ON FINANCE.

HON. BENTON KILLIN.

HON. WILLIAM M. HILLEARY.

HON. J. M. CHURCH.

FACULTY.

MENTAL AND MORAL SCIENCE.

THOS. M. GATCH, A. M., PH. D.....President.

AGRICULTURE AND DAIRYING.

JAMES WITHYCOMBE, V. S.....Vice-Director and Prof. of Agriculture.

F. L. KENT, B. AGR..... Assistant in Dairying.

M. F. WOOD, B. S. A..... Foreman of Farm.

HISTORY AND MODERN LANGUAGES

F. BERCHTOLD, A. M.....Dean of College.

MECHANICS, PHYSICS AND MECHANICAL ENGINEERING.

GRANT A. COVELL, M. E.....Professor.

E. C. HAYWARD, E. E..... Assistant.

D. W. PRICHARD.....Assistant in Woodwork.

M. CLYDE PHILLIPS, B. M. E.....Assistant in Blacksmithing.

HOUSEHOLD ECONOMY AND HYGIENE.

MISS MARGARET C. SNELL, M. D..... Professor.

MRS. MARY AVERY.....Assistant in Sewing Dept.

CHEMISTRY.

G. W. SHAW, PH. D.....Professor.

JOHN F. FULTON, B. S..... Assistant Professor.

C. M. MCKELLIPS, Ph. C.....Assistant Chemist and Instructor in Pharmacy.

ENGLISH LANGUAGE AND LITERATURE.

J. B. HORNER, A. M.....Professor.

MRS. IDA B. CALLAHAN, B. S..... Assistant.

MATHEMATICS AND CIVIL ENGINEERING.

GORDON V. SKELTON, C. E.....Professor.

CHAS. L. JOHNSON, B. S..... Assistant.

ZOOLOGY AND ENTOMOLOGY.

A. B. CORDLEY, B. S..... Professor.

BOTANY AND HORTICULTURE.

E. R. LAKE, M. Sc.....Professor.

GEO. COOTE.....Florist and Gardener.

FREEHAND DRAWING AND PHOTOGRAPHY.

E. F. PERNOT.....Professor.

MISS DOROTHEA NASH, B. H. E.....Asst. in Freehand Drawing.

ELOCUTION AND PHYSICAL CULTURE.

MISS HELEN V. CRAWFORD, B. S.....Professor.

MUSIC.

MISS DOROTHEA NASH, B. H. E.....Instructor.

MILITARY SCIENCE AND TACTICS.

CADET MAJOR E. J. LEA..... Instructor.

Students.



SENIORS.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Burnette, Minnie.....	H. S.	Corvallis	Benton.
Casto, Ella	"	Carus.....	Clackamas.
Cauthorn, Franke.....	"	Corvallis.....	Benton.
Cox, Jessie.....	"	Corvallis.....	Benton.
Davis, Mabel.....	"	Corvallis.....	Benton.
Getty, Fanny.....	"	Empire.....	Coos.
Greffoz, Rosalie.....	"	Corvallis.....	Benton.
Jones, Mary	"	Corvallis.....	Benton.
Kidder, Alice.....	"	North Yamhill. Yamhill.	
Lane, Clara.....	"	Corvallis	Benton.
Laurence, Lyle.....	"	Oregon City	Clackamas.
Lyford, Genevieve	"	Rock Island, Illinois.	
McBride, Idella Florence	"	Shedd	Linn.
Purdy, Esther	"	Corvallis	Benton.
Smith, Leona.....	"	Corvallis... ..	Benton.
Spencer, Hattie.....	"	Corvallis... ..	Benton.
Wells, Cleora.....	"	Corvallis.....	Benton.
Aldrich, J. G.....	S. A.	Cascade Locks. Wasco.	
Howell, R. H.....	"	Corvallis.....	Benton.
Powers, Loren T.....	"	Wallowa.....	Wallowa.
Woodcock, A. R.	"	Corvallis.....	Benton.
Beach, W. H.....	M. E.	Oregon City.....	Clackamas.
Beard, Harry	"	Tangent	Linn.
Huffman, Jesse.....	"	Philomath	Benton.
McKee, Rob't	"	Amity	Yamhill.
Murray, L. W.....	"	Corvallis.....	Benton.
Patterson, W. L.....	"	Empire.....	Coos.
Van Groos, James.....	"	Turner	Marion.
Van Groos, John... ..	"	Turner	Marion.
Walters, F. C.....	"	Monroe	Benton.
Adams, G. W.....	Elec.	Baker City.....	Baker.
Edwards, Fred A.....	"	Mayville.....	Gilliam.
Gellatly, Robert	"	Philomath	Benton.
McBride, Horace.....	"	Shedd	Linn.
Smith, Nolan.....	"	Dallas.....	Polk.
Scoggin, H. A.....	"	Fossil.	Wheeler.

JUNIORS.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Buxton, Minnie.....	H. S.	Forest Grove ...	Washington.
Findlay, Jessie.....	"	Carlton.....	Yamhill.
Hershner, Joyce.....	"	Corvallis	Benton.
Jackson, Dora.....	"	Corvallis.	Benton.
Mathany, Maggie.....	"	Wren	Benton.
Maxfield, Florence....	"	Suver	Polk.
Ownby, Lettie.....	"	Corvallis	Benton.

JUNIORS.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Ranney, Lillie.....	H. S.	Corvallis	Benton.
Rueter, Elsie.....	"	Forest Grove ..	Washington.
Smith, Etta	"	Corvallis	Benton.
Starr, Eva	"	Monroe	Benton.
Aldrich, E. B.	S. A.	Cascade Locks..	Wasco.
Burgess, R. D.....	"	Marshfield	Coos.
Dilly, W. R.....	"	Wren	Benton.
Elgin, J. Grant	"	Corvallis	Benton.
Penland, H. E.....	"	Halsey	Linn.
Winslow, Glenn.	"	Sheridan	Yamhill.
Bier, A. J.....	M. E.	Corvallis	Benton.
Buxton, Harry.....	"	Forest Grove ..	Washington.
Frazier, A. H.....	"	Sheridan	Yamhill.
Junkin, Herbert.....	"	Corvallis	Benton.
Kruse, Archie.....	"	Marshfield	Coos
Kruse, Fred	"	Marshfield	Coos.
Leavens, A.....	"	Cascade Locks..	Wasco.
McCautland, J	"	Corvallis	Benton.
McBride, John.....	"	Shedd.....	Linn.
Palmer, T. E.....	"	Williams	Josephine.
Saunders, C. A	"	Empire.....	Coos.
West, Theodore.....	"	Astoria.....	Clatsop.
Yoder, A. L.	"	Needy	Clackamas.

SOPHOMORES.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Barclay, Leah.....	H. S.	Monroe	Benton.
Beall Lulu.....	"	Central Point ..	Jackson.
Burton, Ivy..	"	Independence ..	Polk.
Campbell, Etta.....	"	Ballston.	Polk.
Croxton, Osyth	"	Grants Pass.....	Josephine.
Cumming, Cora.....	"	Suver	Polk.
Danneman, Carrie.....	"	Clem.....	Gilliam.
Emmett, Bertha.....	"	Salem	Polk.
Freed, Odessa.....	"	Grants Pass.....	Josephine
Fuller, Inez	"	Corvallis	Benton.
Garrow, Edna	"	Parkplace	Clackamas.
Gibbs, Mary.....	"	Harrisburg	Linn.
Harlan, Nettie.....	"	Corvallis	Benton.
Herbert, Myrtle.....	"	Corvallis	Benton.
Hill, Garlin.....	"	Independence..	Polk.
Hillman, Ethel.....	"	Corvallis.....	Benton.
Hodgin, Dora.....	"	Independence ..	Polk.
Hollister, Ethel	"	Corvallis	Benton.
Hoover, Maud	"	Fossil	Wheeler.
Hoover, Lizzie.....	"	Fossil	Wheeler.
James, Julia.....	"	Suver	Polk.
Jackson, Leona	"	Corvallis.....	Benton.
Jensen, Edna.....	"	Gaston	Washington.
Jones, Mabel.....	"	Brooks	Marion.
Jones, Katharine... ..	"	Independence ..	Polk.
Johnson, Mildred ..	"	Corvallis.....	Benton.
Kiger, Carrie.....	"	Blodgett.....	Benton.
Kyle, Ethel.....	"	Corvallis	Benton.
McConnell, Maud.....	"	Mayville	Gilliam.
McKenny, Lillie.....	"	Corvallis	Benton.
Michael, Grace.....	"	Corvallis	Benton.

SOPHOMORES.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Michael, Bessie	H. S.	Corvallis	Benton.
Reader, Allie.....	"	Dusty	Benton.
Riddle, Blanche.....	"	Riddle	Douglas.
Rowland, Mamie.....	"	Corvallis	Benton.
Settlemier, Elizabeth.....	"	Tangent.....	Linn.
Smith, Bessie.....	"	Salem	Polk.
Smith, Kittie.....	"	Gervais	Marion.
Starr, Vivian.....	"	Tangent.....	Linn.
Whitaker, Agnes.....	"	Corvallis	Benton.
Wilson, Flora.....	"	Canyonville	Douglas.
Withycombe, Mabel.	"	Corvallis	Benton.
Zumwalt, May.....	"	Irving	Lane.
Barclay, Ross.....	S. A.	Monroe	Benton.
Brown, Ivan.....	"	Hockinson	State of Wash.
Gilstrap, R. L.....	"	Junction City...	Lane.
Hawley, C. F.....	"	Bluff	Lane.
Junkin, W. S.....	"	Corvallis	Benton.
Stephens, F. C.....	"	Corvallis	Benton.
Stovall, Lawrence.....	"	Corvallis	Benton.
Tulley, Lucien.....	"	Wallowa	Wallowa.
Withycombe, R.....	"	Corvallis	Benton.
Yoder, O. P.....	"	Needy	Clackamas.
Bridgess, Forrest... ..	M. E.	Hillsboro.....	Washington
Bruce, B. W.	"	Turner	Marion.
Campbell, A.....	"	Ballston	Polk.
Davis, Harry.....	"	Corvallis	Benton.
Dyer, Edward.....	"	Albany.....	Linn.
Fry, R. M.....	"	Corvallis	Benton.
Garrow, W. W.....	"	Parkplace	Clackamas.
Garrow, J. G.....	"	Parkplace	Clackamas.
Guild, J. A.....	"	McMinnville ...	Yamhill.
Herbert, S. D.....	"	Corvallis	Benton.
Kraps, Leo.....	"	Salem.....	Marion.
McTimmonds, Fred.....	"	Dallas	Polk.
Millhollen, L.	"	Oakville	Linn.
Pate, W. L.....	"	Jefferson	Marion.
Post, Chas. M.....	"	Dayton.....	Yamhill.
Riddle, Claude.....	"	Riddle	Douglas.
Scott, J. F.....	"	Tangent.....	Linn.
Sharp, W. L.....	"	Tangent.....	Linn.
Shepard, E. R.....	"	Zena	Polk.
Strong, Harold.....	"	Corvallis	Benton.
Wiley, John	"	Myrtle Creek...	Douglas.
Baber, Emma.	Pharmacy.	Junction City...	Lane.
Holden, Blanche.....	"	Oregon City	Clackamas.
Holland, Constance.....	"	Salem.....	Marion.
Redd, Ernest	"	Carlton	Yamhill.
Stump, Fred.....	"	Salem	Marion.

FRESHMEN.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Abbe, Mabel M.....	H. S.	Summit	Benton.
Allen, Ina.....	"	Amity	Yamhill.
Applegate, Rachel.....	"	Yoncalla	Douglas.
Applegate, Mitta.....	"	Yoncalla	Douglas.
Baldwin, Edith.....	"	Corvallis	Benton.
Barclay, Gertrude.....	"	Monroe	Benton.

FRESHMEN.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Belknap, Frances.....	H S.	Corvallis	Benton.
Blakeslee, Clara.....	"	Corvallis.....	Benton.
Blakeslee, Della.....	"	Corvallis..	Benton.
Brown, Dollie.....	"	Corvallis.....	Benton.
Buchanan, Edith.....	"	Corvallis.....	Benton.
Cavanagh, Leila.....	"	Turner.	Marion.
Cochran, Maud.....	"	Needy.....	Clackamas.
Clein, Edith.....	"	Albany.....	Linn.
Crawford, Mamie.	"	Corvallis	Benton.
Crawford, Clara.....	"	Corvallis	Benton.
Crawford, Ruby.	"	Portland.....	Multnomah.
Cronise, Mabel.....	"	Corvallis	Benton.
Davis, Estelle.....	"	Portland	Multnomah.
Elgin, Melvena.....	"	Corvallis	Benton.
Ellis, Grace.....	"	Corvallis	Benton.
Ewing, Gertrude.	"	Fulton	Multnomah.
Findlay, Carrie.....	"	Carlton	Yamhill.
Frickey, Minnie.....	"	Mayville.....	Gilliam.
Garret, Rena.....	"	Corvallis	Benton.
Getty, Mary.....	"	Buena Vista	Marion.
Gregg, Elona.....	"	Ballston.....	Polk.
Horton, Alice.....	"	Monroe	Benton.
Horning, Odalite.	"	Silver Lake.....	Lake.
Keese, Archie.....	"	Bonanza.....	Klamath.
Ladd, Bessie.....	"	Arlington.....	Gilliam.
Locke, Elsie.....	"	Corvallis	Benton.
Looney, Marguerite.....	"	Jefferson	Marion.
Mattley, Maud.....	"	Lewisville.....	Polk.
Miller, Nora.....	"	Corvallis.....	Benton.
Miner, Christal.	"	Buena Vista	Polk.
Miner, Christie.....	"	Buena Vista	Polk.
Norton, Rena.....	"	Blodgett.....	Benton.
Oleman, Ida.....	"	King's Valley ..	Benton.
Parson, Stella.....	"	Albany.....	Linn.
Peterson, Leona.....	"	McMinnville ...	Yamhill.
Phillips, Eugenia.	"	Dallas	Polk.
Phillips, Eloise.....	"	Dallas.....	Polk.
Rickard, Thella.....	"	Corvallis	Benton.
Shelton, Pearl.....	"	Arlington.....	Gilliam.
Small, Linnie.	"	Silver Lake.....	Lake.
Small, Belle.....	"	Silver Lake.....	Lake.
Smith, Ethel.	"	Salem	Marion.
Sperling, Martha.....	"	Harrisburg.....	Linn.
Spangler, Lulu.....	"	Corvallis	Benton.
Starr, Elva.....	"	Monroe.....	Benton.
St. Germain, Elizabeth...	"	Corvallis	Benton.
Stephens, Amy.....	"	Corvallis	Benton.
Steinwer, Helen.	"	Jefferson.....	Marion.
Tharp, Margie.....	"	A'sea.....	Benton.
Thompson, Orla.....	"	Willard.....	Marion.
Thompson, Bessie.....	"	Fossil	Wheeler.
Travis, Anna.....	"	Falls City	Polk.
Weber, Agnes.....	"	Corvallis	Benton.
Williams, Bertha.....	"	Latourelle Falls, Multnomah.	
Williams, Nina.....	"	Latourelle Falls, Multnomah.	
Wittschen, Virgene.	"	Turner	Marion.
Zumwalt, Inez.....	"	Corvallis	Benton.

FRESHMEN.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Allingham, C.....	S. A.	Shedd	Linn.
Barnhart, Ray.....	"	Corvallis	Benton.
Buchanan, Claude.....	"	Corvallis	Benton.
Evans, W. A.....	"	Estrup	Lane.
Gallagher, F. R.....	"	North Yamhill.....	Yamhill.
Goodrich, Ray.....	"	North Yamhill.....	Yamhill.
Hanley, W. E.....	"	Hillsboro.....	Washington.
Harder, Ralph.....	"	Astoria	Clatsop.
Hedges, Pearl.....	"	Independence ..	Polk.
Houston, Fred C.....	"	Mohawk.....	Lane.
Jenks, Enoch.....	"	Tangent.....	Linn.
Jenks, Forrest.....	"	Tangent.....	Linn.
Jensen, Claude.....	"	Gaston	Washington.
Jones, Thos. L.....	"	Buena Vista	Polk.
Kissling, Jake.....	"	Pratum.....	Marion.
Mattley, L. G.....	"	Corvallis	Benton.
Nash, Roderic.....	"	Nashville.....	Lincoln.
Schroeder, R.....	"	Arago.....	Coos.
Shepard, Ralph.....	"	Zena	Polk.
Simmons, H.....	"	Mayville.....	Gilliam.
Smith, Minnie G.....	"	Latourelle.....	Multnomah.
Smith, John E.....	"	Amity	Yamhill.
Tarter, Herman.....	"	Airlie	Polk.
Tedrow, E. A.....	"	Monmouth	Polk.
Thompson, G. H.....	"	Pratum.....	Marion.
Tully, Edgar.....	"	Wallowa.....	Wallowa.
West, Paul	"	Warrenton.....	Clatsop.
Wood, H. S.....	"	Arlington.....	Gilliam.
Alspaugh, A. M.....	M. E.	Eagle Creek	Clackamas.
Archibald, R. C.....	"	Tangent.....	Linn.
Barratt, Harry.....	"	Heppner.....	Morrow.
Baxter, Elmer	"	Dayton.....	Yamhill.
Beatty, Carl	"	Chemawa.....	Marion.
Bilyeu, Thos	"	Athena	Umatilla.
Butler, Earl	"	Portland.....	Multnomah.
Burnett, Bruce.....	"	Corvallis.....	Benton.
Brandeberry, M.....	"	Corvallis.....	Benton.
Collins, Chas	"	Monmouth	Polk.
Edelman, G. L.....	"	Mayville.....	Gilliam.
Flint, Will.....	"	Woodburn.....	Marion.
Fruit, D. A	"	Peoria.....	Linn.
Fry, Thomas	"	Corvallis	Benton.
Gillette, Glen.....	"	Corvallis	Benton.
Greear, J. C.....	"	Hillsboro.....	Washington.
Griffith, Carl	"	Clymer.....	Marion.
Hillman, W. B.....	"	Corvallis	Benton.
Hite, F. E.....	"	Progress.....	Washington.
Horton, John.....	"	Monroe	Benton.
Humphreys, Lester W....	"	Canyonville.....	Douglas.
Johnson, Luther	"	Portland	Multnomah.
Jones, Herbert W.....	"	Portland	Multnomah.
Kinney, A. W	"	Astoria.....	Clatsop.
Kurtichanov, Leonard E.	"	Chitwood.....	Lincoln.
Laughlin, C	"	North Yamhill.....	Yamhill.
Laighton, Lee	"	Astoria	Clatsop.
Leadbetter, N. W.....	"	Corvallis.....	Benton.
Lusted, Harry	"	Troutdale.....	Multnomah.

FRESHMEN.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Martin, Harold.....	M. E.	Corvallis.....	Benton.
McDaniel, L. E.....	"	Corvallis.....	Benton.
McGillivray, A.....	"	Shaw.....	Marion.
McTimmonds, R.....	"	Lewisville.....	Polk.
Palmer, J. L.....	"	Halsey.....	Linn.
Payne, Frank.....	"	Silver Lake.....	Lake.
Phillips, Ira.....	"	Dallas.....	Polk.
Planting, H.....	"	Warrenton.....	Clatsop.
Pugh, Geo.....	"	Salem.....	Marion.
Rood, Thos.....	"	Hillsboro.....	Washington.
Ross, Hubert E.....	"	Vansycle.....	Umatilla.
Saltus, F.....	"	Middletown.....	Washington.
Sanders, Ruben.....	"	Chemawa.....	Marion.
Starr, Artie.....	"	Corvallis.....	Benton.
Steiwer, Fred.....	"	Jefferson.....	Marion.
Tedrow, C.....	"	Monmouth.....	Polk.
Thrasher, F.....	"	Corvallis.....	Benton.
Thurston, Sam.....	"	Suver.....	Polk.
Travis, Allan.....	"	Falls City.....	Polk.
Underwood, Irving M.....	"	Sherar's Bridge.....	Wasco.
Van Groos, W.....	"	Corvallis.....	Benton.
Van Groos, Martin.....	"	Corvallis.....	Benton.
Wetzel, Curtis.....	"	Turner.....	Marion.
Wilson, Bush.....	"	Corvallis.....	Benton.
Winn, Geo.....	"	Weston.....	Umatilla.
Witzel, H.....	"	Turner.....	Marion.
Witzel, Royal.....	"	Turner.....	Marion.
Wittschen, Royal.....	"	Turner.....	Marion.
Woodcock, H.....	"	Corvallis.....	Benton.
Belt, Harold.....	Pharmacy.	Corvallis.....	Benton.
Bristow, Ethel.....	"	Corvallis.....	Benton.
Butcher, Emmet.....	"	Arlington.....	Gilliam.
Dempsey, Frederick M.....	"	Portland.....	Multnomah.
Hartley, Jas. W.....	"	Lorane.....	Lane.
Henkle, Raymond.....	"	Corvallis.....	Benton.
Johnson, Jas.....	"	Harrisburg.....	Linn.
Morrison, W. J.....	"	Oakville.....	Linn.
Rosendorf, E. Z.....	"	Independence.....	Polk.
Spencer, Victor.....	"	Corvallis.....	Benton.
Stewart, Lenora.....	"	Corvallis.....	Benton.
Standlee, John B.....	"	Cornelius.....	Washington.
Sturgeon, Maud.....	"	Tillamook.....	Tillamook.
Ward, Frank.....	"	Plainview.....	Linn.
Wills, Bert G.....	"	Hillsboro.....	Washington.

SPECIAL STUDENTS.

NAMES.	COURSE.	P. O. ADDRESS.	COUNTY.
Buchanan, Alice.....	Special.	Corvallis.....	Benton.
Colt, Chester T.....	"	Summerville.....	Union.
Colt, Joie V.....	"	Summerville.....	Union.
Crawford, Frank.....	"	Corvallis.....	Benton.
Daniel, I. R.....	"	Corvallis.....	Benton.
Finley, Ross.....	"	Corvallis.....	Benton.
Fuller, Addie.....	"	Corvallis.....	Benton.
Gellatly, Nettie.....	"	Philomath.....	Benton.
Gellatly, Jennie.....	"	Philomath.....	Benton.
Gilstrap, W. J.....	"	Junction City.....	Lane.
Groves, Edna.....	"	Corvallis.....	Benton.

SPECIAL STUDENTS.

NAMES.	COURSE	P. O. ADDRESS.	COUNTY.
Hartless, Georgia	Special.	Corvallis	Benton.
Harris, S. E.....	"	Elgin.....	Union.
Kidder, Faith.....	"	Corvallis	Benton.
Kyle, Ena.....	"	Corvallis	Benton.
Lea, E. J.....	"	Cottage Grove..	Lane.
Linville, Bertie.....	"	Corvallis	Benton.
Maxwell, Ida.....	"	Halsey	Linn.
Nash, Dorothea.....	"	Nashville.....	Lincoln.
Nelms, Mrs. May.....	"	Corvallis	Benton.
Phillips, Miles J.....	"	Corvallis	Benton.
Porter, W. D.....	"	Shedd.....	Linn.
Reid, Mrs. Esther.....	"	Corvallis	Benton.
Small, Chas. E.....	"	Corvallis	Benton.
Stites, Abbie.....	"	Williams	Josephine.
Stovall, Dennis.....	"	Corvallis	Benton.
Tucker, Eva.	"	Corvallis . . .	Benton.
Williams, M. C.....	"	Airlie.....	Polk.
Wyatt, Milton	"	Corvallis	Benton.

RECAPITULATION.

Graduates	15
Seniors.....	36
Juniors	30
Sophomores	79
Freshmen	164
Special Students	14
Total	338
Number of Counties in Oregon	33
Number of Counties represented	24

== State Agricultural College ==

The Agricultural Colleges in the United States are the outgrowth of an Act approved July 2, 1892, entitled "An Act donating public lands to the several States and Territories which may provide Colleges for the benefit of Agriculture and Mechanic Arts."

Every State has availed itself of the privileges granted under this Act, by providing a school under one of the various titles, viz: "Agricultural College; College of Agriculture and Mechanic Arts; or Departments of Agriculture and of Mechanic Arts" connected with a university.

By the Act of 1862, Oregon received 90,000 acres of land, donated by the United States for the purpose of establishing a college. The proceeds from the sale of this land were, by the Act granting it, made a perpetual endowment, and the interest arising from this endowment was set apart for the purpose of helping to sustain a "College of Agriculture and Mechanic Arts."

On August 30, 1890, "An Act" was passed "to apply a portion of the proceeds of the public lands to the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July 2, 1862"

This act provided that in 1890, \$15,000., should be paid to these land grant colleges and that the amount so appropriated should be increased by the sum of \$1,000 annually for ten years, and that thereafter the amount annually appropriated should continue to be \$25,000.

It is provided in this act that this money shall be "applied, only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic sciences with special reference to their application in the industries of life, and to the facilities for such instruction." But it is provided that "no portion of said moneys

shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings."

The scope of the institution, as now organized, cannot be better stated than in the comprehensive words of the act of Congress defining the duty of this and similar colleges.:

"The leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislature of the State may prescribe, *in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.*"

Based upon this broadened foundation, the special work of the State Agricultural College is the training of youth in those branches of learning which lie at the foundation of modern industrial pursuits. In accordance with the purposes of its founders, and the terms of its original charter, it aims to give special and prominent attention to agriculture, both theoretical and experimental; but it also provides "a liberal and practical education," in the leading branches of mathematical, natural and physical sciences, in order to prepare youth "for the several pursuits and professions of life." It has increased its subjects and courses of study, and its teaching and illustrative equipment, to such an extent that now, "without excluding classical studies," its leading object is to teach the various sciences in such a manner as to show their applications in the more important industries, to combine with every branch of instruction such an amount of actual practice in the shop, the field, and the laboratory as will serve to illustrate and apply the theory, but without subordinating it. The course of study, as now arranged, conforms very closely to the recommendations of the *Association of American Agricultural Colleges and Experiment Stations*. The range of its work in this direction is shown, as far as the limits of space will allow, in the following descriptive statements and schedule. It is confidently believed that few institutions in the country furnish opportunities for obtaining advanced scientific education to an equal extent and thoroughness at so moderate a cost and with so many incidental advantages.

LOCATION.

The State Agricultural College is located at Corvallis, Ore., near the head of navigation on the Willamette river. The city, as its name indicates, is in the heart of this beautiful valley. To the east, in the distant horizon, may be seen the Cascades, with their snow-capped peaks, while to the west, and near at hand, is the Coast range. Mary's Peak, the tallest in the range, for several months of the year is covered with snow, and, though twenty miles away, adds beauty to the scene.

Corvallis is located on high ground, is healthful, and has not been visited by any dangerous, epidemic diseases. It is accessible by rail from the east, west, north and south.

POSTOFFICE, EXPRESS AND TELEPHONE COMPANIES.

The postoffice address is Corvallis, Benton Co., Oregon. The Pacific Postal and Western Union Telegraph Companies, and Wells, Fargo & Company's Express have offices in Corvallis.

CAMPUS AND FARM.

The college grounds comprise 198.91 acres. Of this a tract of 35 acres in the immediate vicinity of the main buildings constitutes the campus. This is tastefully laid out and adorned with trees, shrubbery, flower gardens, walks, and drives, and it is intended to have all of the native trees and shrubbery of the state represented on these grounds. On the campus are the grounds for military drill, base ball, foot ball, lawn tennis, bicycle track and general athletics. The college farm consists of about one hundred and fifty five acres, and is near the main college building. The farm is provided with barns, silos, piggery, tool house, implements and stock, sufficient for the purpose of practical instruction in agriculture. One hundred acres of the farm are devoted to a variety of farm crops, grass plats, orchards, berry and vegetable plats, illustrative of the studies and experiments in agriculture and horticulture.

MAIN BUILDING.

The main College building stands on a pleasant elevation at the western side of Corvallis, and is a large substantial brick structure. This building contains many class rooms, chemical, botanical and entomological laboratories, library, chapel, museum, and offices for the President, Dean, and Clerk of the College.

CHEMISTRY BUILDING.

This very neat building is located to the south of, and quite near, the main college building, and contains the station chemical laboratory, students' laboratory, and office of the station and college Chemist. The equipment of the department of chemistry is one of the most complete on the Coast.

NEW GYMNASIUM AND ARMORY.

South of the Chemical Laboratory may be seen the very substantial structure of the Gymnasium and Armory, a building 70 x 120 feet, built of wood and stone. The main hall is used for commencement purposes. The basement, 12 feet high in the clear, contains the bowling alley, physical culture rooms for men and women, commandant's quarters, etc.

The Gymnasium, which is 20 feet to the under side of the trusses, has an unobstructed floor area of 8000 square feet. It is encircled by a suspended gallery six feet wide. A stage, with dressing room for men and women, occupies the east end of the hall.

During the winter months this spacious building serves as a drill hall for the cadets.

HORTICULTURAL HALL AND BACTERIOLOGICAL LABORATORY.

This building stands north of the main building, and contains a class room and laboratory for the department of Horticulture, and the office and operating rooms of the Photo-micrographer of the station.

This building is surrounded by the greenhouses where floriculture is taught and practiced.

POWER HOUSE.

To the west of the main building is located the Power House, a roomy, one story brick structure containing, in the north wing, one forty-five horse power engine with two electric generators of one hundred and twenty-five volts each, furnishing light for all the principal buildings, including the armory and the dormitories, as well as power for Morrill Hall. The south wing, with cement floor, is all one large blacksmith shop enclosing twenty forges for the use of students taking the Mechanical and Agricultural Courses.

MECHANICAL HALL.

One of the most substantial, as well as elegant, structures on the campus is Mechanical Hall, recently finished. With its solid stone walls and galvanized iron roof it is constructed as nearly fireproof as modern architecture can make it.

On the first floor are found the Machine Shops, the Printing Office, the Physical Laboratory and various recitation rooms; while the rooms in the upper story are occupied by the departments of Mechanical and Freehand Drawing. Branches of the Household Science department: Dressmaking and Millinery are also installed here.

The power furnished for the machinery in this building is electricity from the power house—200 yards to the west.

DAIRY.

The Dairy Building is located west of the young ladies' hall, and contains a complete system of apparatus for giving practical instruction in its line of work. It also contains the office of the Dairy Instructor.

BOARDING HALLS, AND COST OF LIVING.

The Women's Hall, under the control of Prof. Margaret C. Snell, M. D., of the Department of Household Science and Hygiene, is a cheerful and delightful home for the young women students.

The building is provided with the necessary furniture, water, and electric light, and contains accommodations sufficient for about thirty young ladies.

CAUTHORN HALL, OR YOUNG MEN'S HALL.

This is a large and comfortable building, four stories high, well provided with water, steam heat, and electric lights.

The dining room, kitchen, and club rooms of this building are commodious, pleasant, and well furnished. There is room sufficient to accommodate about one hundred students.

SOCIAL LIFE OF THE STUDENTS.

The various literary societies of the college give socials during each term, which are usually attended by members of the Faculty. Class parties are also given at various times during the year. These evenings are enlivened by music and literary exercises and form a pleasant feature of the student's social life.

These social affairs, although under the direction of a committee of the Faculty, are managed by the students, who thereby acquire a training in social ways and life that is always of great value to them.

COURSES OF STUDY.

The courses offered at the College are arranged under four general heads--Agriculture, Mechanics, Household Science and Pharmacy. All of these courses require a general training in Mathematics, History, English, Elocution and Drawing.

Graduation requires four years of College work. The studies for the first three years are compulsory; but a large part of the Senior year work is elective. The plan of the course is arranged in this manner in order that the student may be allowed to devote the greater part of his last year's work to intensify in some special line.

In the Agricultural Course the student may select his last year's work in Horticulture, Dairy Work, or General Agriculture.

In the Household Science Course the young ladies may select Dressmaking, Cooking, Economy and Chemistry of Foods, or Floriculture.

The Mechanical Course offers elective Mechanical Drawing, Woodwork, Ironwork, Mechanical or Electrical Engineering.

Prescription Work, Quantitative, and Pharmaceutical Analysis largely fill out the last year in the Pharmacy Course.

GRADUATE WORK.

Opportunity is offered to students to continue their work after graduation, a course for advanced degrees having been established by the Board of Regents. The conditions and requirements of this course are set forth on page 25 of this catalogue.

EXPERIMENT STATION.

This Station with all of its scientific equipments is located at the College, and the professors of the College are members of the station staff. The students at the College may have the benefit of the experiments carried on at the station as well as of all the literature of scientific work in the station library.

Courses of Study.

THE COURSE IN AGRICULTURE.

A Four-year Course Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

First Term.

Algebra, A, 5.
English, A, 5.
General History, A, 5.
Freehand Drawing,* A, 5.
Woodwork, A, 5.
Military Drill, A, 3.

Second Term.

Algebra, A, 5.
English, B, 5.
General History,* B, 5.
Elocution, A, 2.

Freehand Drawing, A, 3.
Woodwork, A, 5.
Military Drill, B, 3.

Third Term.

Algebra, A, 5.
English, C, 5.
Structural and Systematic Botany, A, 5.
Breeds of Stock,* A, 5.
Elocution, B, 2.
Practicum in Horticulture, A, 3.
Military Drill, C, 3.

SOPHOMORE YEAR.

First Term.

Geometry, B, 5.
Rhetoric, D, 5.
Economic Botany,* B, 5.
Dairying, B, $2\frac{1}{2}$.
Drainage, C, $2\frac{1}{2}$.
Practicum in Agriculture, D, $2\frac{1}{2}$;
Farm Accounts, $2\frac{1}{2}$.
Military Drill, D, 3.

Second Term.

Geometry, B, 5
Chemistry, Non-Metals, A, 6.

Rhetoric, E, 4.
Biology,* A, 6.
Blacksmithing, D, 4.
Military Drill, D, 3.

Third Term.

Trigonometry, C, 5.
Chemistry, Metals, B, $7\frac{1}{2}$.
English Literature,* F, 5.
Soils and Manures, E, 5.
Blacksmithing, E, $2\frac{1}{2}$.
Military Drill, F, 3.

JUNIOR YEAR.

First Term.

English Literature, G, 5.
Zoölogy, B, $7\frac{1}{2}$.
Qualitative Analysis, C, $7\frac{1}{2}$.
Practical Work in Dairying,* F 5.
Military Drill, G, $1\frac{1}{2}$.
Military Science, H, $1\frac{1}{2}$.
Elective: Blacksmithing, D, 5.

Second Term.

Plant Physiology, C, 4.
Horticulture, B, 4.

Physics, L, 6.
Physiology, C, 6.
Agricultural Chemistry,* E, 4.
Military Science, I, 3.

Third Term.

Surveying,* F, 6.
Physics, L, $7\frac{1}{2}$.
Stock Feeding and Breeding, G, 4.
Entomology, D, $7\frac{1}{2}$.
Military Drill, J, 3.

SENIOR YEAR.

First Term.

- Required studies. { Economics, B, 5.
French, German or
Latin, G, 5.
Military Drill, K, 3.
- Elect one { Meteorology, H, 3;
and Physical Lab., 6.
Analytical Chemistry,
F, 9.

PRACTICUMS.

- Elect one { Agriculture, 6.
Horticulture, 6.
Botany, E, 6.
Biology, 6.

Second Term.

- Required studies. { Psychology, C, 5.
French, German, or
Latin, G, 4.
Elocution, D, 2.
Military Science, L, 3.

- Elect one { Forestry, D, 5.
Veterinary Science,
I, 5.
Analytical Chemis-
try, F, 10.

PRACTICUMS.

- Elect one { Agriculture, 6.
Horticulture, 6.
Botany, F, 6.
Biology, 6.

Third Term.

- Required studies. { Civics, E, 5.
French, German, or
Latin, G, 5.
Military Science, M,
3.
- Elect one { American Literature
H, 5,
Agricultural Engin-
eering, K, $2\frac{1}{2}$, and
Road-making, K, $2\frac{1}{2}$
Veterinary Science,
J, 5.
Plant Breeding, D, $2\frac{1}{2}$;
Landscape Garden-
ing, D, $2\frac{1}{2}$.
Geology, M, 5.
Analytical Chemis-
try, F, 10.

PRACTICUMS.

- Elect one { Agriculture, 8,
Horticulture, 8,
Botany, G, 8,
Biology, 8.

NOTE.—In lieu of studies marked with an *, Latin, French or German may be substituted for that particular term in any of the three courses.

MECHANICAL COURSE.

A Four-year Course Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

First Term.

- Algebra, A, 5.
English, A, 5.
General History, A, 5.
Freehand Drawing,* A, 5.
Woodwork, A, 5.
Military Drill, A, 3.

Second Term,

- Algebra, A, 5.
English, B, 5.
General History,* B, 5.

- Elocution, A, 2.
Freehand Drawing, A, 3.
Woodwork, A, 5.
Military Drill, B, 3.

Third Term.

- Algebra, A, 5.
English, C, 5.
Freehand Drawing,* A, 5.
Elocution, B, 2.
Woodwork, A, 5.
Military Drill, C, 3.

SOPHOMORE YEAR.**First Term.**

Geometry, B, 5.
 Rhetoric, D, 5.
 Mechanical Drawing, D, 5.
 Blacksmithing,* E, 5.
 Shop Accounts, 2½.
 Military Drill, D, 3.

Second Term.

Geometry, B, 5.
 Chemistry, Non-Metals, A, 6.
 Rhetoric, E, 4.

Mechanical Drawing,* D, 5.
 Blacksmithing, E, 5.
 Military Drill, E, 3

Third Term.

Trigonometry, C, 5,
 English Literature,* F, 5.
 Chemistry, Metals, B, 7½.
 Mechanical Drawing, D, 5.
 Blacksmithing, E, 2½.
 Military Drill, F, 3.

JUNIOR YEAR.**First Term.**

English Literature, G, 5.
 Mechanism, I, 5.
 Analytical Geometry, D, 5.
 Descriptive Geometry,* J, 5.
 Shop-work, K, 5.
 Military Drill, G, 1½.
 Military Science, H, 1½.

Second Term.

Physiology, C, 6.
 Physics, L, 6.

Descriptive Geometry,* J, 3.
 Analytical Geometry, D, 2½.
 Calculus, E, 2½.
 Machine Shop, N, 5.
 Military Science, I, 3.

Third Term.

Calculus, E, 5.
 Physics, L, 7½.
 Steam Engines and Boilers, P, 4.
 Civics,* E, 5.
 Machine Shop, N, 4.
 Military Drill, K, 3.

SENIOR YEAR.**MECHANICAL COURSE.—First Term.**

Required studies. { Economics, B, 5.
 { Mechanics of Engi-
 { neering, R, 5.
 { Thermodynamics, S, 2
 { Physical Laboratory, T, 6.
 { Military Drill, K, 3.

Electives { French, German, or
 { Latin, G, 5.

ELECTRICAL COURSE.—First Term.

Required studies. { Economics, B, 5.
 { Mechanics of Engi-
 { neering, R, 5.
 { Electricity and Mag-
 { netism, X, 7.
 { Physical Laboratory,
 { T, 6.
 { Military Drill, K, 3.

Electives { French, German, or
 { Latin, G, 5.

PRACTICUMS:

Elect one { Woodwork, 5.
 { Ironwork, 5.
 { Mechanical Draw-
 { ing, 5.

Second Term.			Second Term.		
Required studies.	{	Psychology, C, 5.	Required studies.	{	Psychology, C, 5.
		Elocution, D, 2.			Elocution, D, 2.
		Machine Design, W, 3.			Machine Design, W, 3.
		Mechanics of Engineering, 5.			Mechanics of Engineering, 5.
		Military Science, L, 3.			Electricity and Magnetism, X, 7.
Electives	{	French, German, or Latin, G, 5,	Electives	{	Military Science, L, 3.
					French, German, or Latin, G, 5.
Elect one	{	PRACTICUMS:	Electives	{	Third Term.
		Woodwork, 5.			Strength of Materials, U, 2½.
		Ironwork, 5.			Hydraulics, V, 2½.
Required studies.	{	Mechanical Drawing, 5.	Required studies.	{	Machine Design, W, 5.
					Electricity and Magnetism, X, 7.
					Military Drill, M, 3.
					French, German, or Latin, G, 5.
					American Literature, H, 5.
Elect one	{	French, German, or Latin, G, 5.	Electives	{	Surveying, F, 6.
		American Literature H, 5.			
PRACTICUMS: Woodwork, 5. Ironwork, 5. Mechanical Drawing, 5. Elect one.					

NOTE.—In lieu of studies marked with an *, Latin, French or German may be substituted for that particular term in any of the three courses.

COURSE IN HOUSEHOLD SCIENCE.

A Four-year Course Leading to the Degree of Bachelor of Science.

FRESHMAN YEAR.

First Term

Algebra, A, 5.
 English, A, 5.
 General History, A, 5.
 Freehand Drawing,* A, 5.
 General Hygiene, B, 1.
 Sewing, B, 4.
 Physical Culture, C, 3.

Second Term.

Algebra, A, 5.
 English, B, 5.
 General History,* B, 5.
 Elocution, A, 2.

Freehand Drawing, A, 3.
 Etiquette, B, 1.
 Sewing, B, 4.
 Physical Culture, C, 3.

Third Term.

Algebra, A, 5.
 English, C, 5.
 Structural and Systematic Botany, A, 5.
 Freehand Drawing,* A, 5.
 Elocution, B, 2.
 Sewing, B, 5.

SOPHOMORE YEAR.

First Term.

Geometry, B, 5.
 Elocution, C, 2½.
 Economic Botany,* B, 5.
 Rhetoric, D, 5.
 Dress-making, H, 5.
 Household Accounts, 2½.
 Physical Culture, C, 3.

Second Term.

Geometry, B, 5.
 Modern History, C, 5.

Chemistry, Non-Metals, A, 6.
 Rhetoric, E, 4.
 Biology,* A, 6.
 Physical Culture, C, 2.

Third Term.

English Literature,* F, 5.
 Dressmaking, H, 10.
 Chemistry, Metals, B, 7½.
 Dairying, F, 2½.
 Ancient History, D, 2½.

JUNIOR YEAR.

First Term.

English Literature, G, 5.
 Chemistry, C, and D, 7½.
 French, German, or Latin, F, 5.
 Zoölogy, B, 7½.
 Canning of Fruit, M, 3.

Second Term.

Floriculture, C, 5.
 French, German, or Latin, F, 5.
 Physiology, C, 6.

History of Civilization, H, 5.
 Cookery, M, 3.
 Physical Culture, C, 3.

Third Term.

American Literature, H, 5, or Trigonometry, C, 5.
 French, German, or Latin, F, 5.
 Entomology, D, 7½.
 Civics, E, 5.
 Cookery, M, 3.

SENIOR YEAR.

First Term.

Required studies. {
 Economics, B, 5.
 Special Hygiene, R, 1. Elect one
 Aesthetics, R, 4.
 French, German, or
 Latin, G, 5.
 Needlework, S, 5.

Elect one {
 Meteorology, G, 2;
 and Landscape Gardening, D, 3,
 Chemistry of Foods, G, 5.
 Biology, E, 6.
 Botany, E, 6.

Second Term.

Required studies. {
 Psychology, C, 5.
 Elocution, D, 2.
 French, German,
 or Latin, G, 5.
 Sanitary Science, R, 1.
 Aesthetics, R, 4.

{ Physics, L, 7½.
 Chemistry of Foods,
 G, 10.
 Biology, F, 10.
 Botany, F, 6.

Third Term.

Required studies. {
 Home Furnishing, V, 1.
 Emergency Lectures, V, 1.
 French, German, or Latin, G, 5.
 Physics, L, 7½.
 Geology, M, 5.
 Advanced Drawing, B, 10.
 Chemistry of Foods, G, 10.
 Biology, G, 10.
 Botany, G, 8.

NOTE.—In lieu of studies marked with an *, Latin, French or German may be substituted for that particular term in any of the three courses.

PHARMACY.

A course in pharmacy, covering a period of four years, is offered as follows:

During the first two years the students of this course enter the regular classes as prescribed in the following outline:

English, A, B, C, D, E, F; Mathematics, A, B, C; History, A, D; Latin, A, B, C, H; Science, Biology, A; Botany, A; Vertebrate Anatomy, B; Physiology, C; Chemistry, A and B.

In the Junior and Senior years the students specialize their work, devoting their time exclusively to those studies having immediate application to pharmacy in accordance with the following schedule:

JUNIOR YEAR.

SUBJECT.	No. hours Recitation.	No. hours Laboratory
Pharmacy.....	52	174
Pharmacognosy.....		52
Nomenclature.....	12	
Therapeutics.....	24	
Inorganic Qualitative Analysis.....	12	168
Organic Chemistry.....	20	
Inorganic Preparations.....		120
Physics. See general catalogue.....	66	92
Physiological Botany.....	*60	

SENIOR YEAR.

SUBJECT.	No. hours Recitation.	No. hours Laboratory
Therapeutics.....	36	
Pharmacognosy.....		36
Materia Medica.....	78	
Operative Pharmacy.....	36	108
Prescription Work.....	26	108
Quantitative Analysis.....	12	108
Urinalysis.....		40
Pharmaceutical Analysis.....		*300

* Recitation and Laboratory.

Advanced Degrees.

Advanced degrees will be given to graduates of this College, or similar, approved colleges, upon the following conditions:—

A candidate for higher degrees must present himself for examination in one major and at least one minor study (the major and minor must be taken in different departments and must have been previously approved by the Faculty); he must also prepare a thesis, based upon original research, which shows scholarly acquirements of a high order. This thesis must be printed or typewritten and bound, and three copies of it left in the College archives. The candidate must spend at least two academic years, or their equivalents, as a resident student at this College in preparing for this degree.

Three advanced degrees are offered as follows:—

1. *Master of Science*.—Courses of study leading to the degree of Master of Science are provided for in the following departments: Agriculture, Botany, Chemistry, Economics, Horticulture, and Zoölogy. A major and a minor study may be selected from courses in any two of these departments; or the minor may be one of the Modern Languages, or from the departments of Mathematics or Physics, or History.

2. *Mechanical Engineer*.—Candidates for the degree of Mechanical Engineer must be graduates of the department of Mechanics of this College or of a similar department of an approved college. A course in mechanical engineering or electrical engineering, must be selected for the major study; for the minor, a course may be selected from the departments of Mathematics, Chemistry, Physics, Economics, or Modern Languages.

3. *Master of Household Science*.—Graduates of the department of Household Science of this or similar, approved institutions may, for the degree of Master of Household Science, select for a major any course given in the department of Household Science, and for a minor a course in any department in which a minor for the degree of Master of Science is offered.

Departments of Instruction.

Mental and Political Science.

PRESIDENT THOMAS M. GATCH, A. M., PH. D.

Economics.—Course B.—During the first part of the term our aim is to familiarize the student with the principles of the science. The last part of the term is devoted principally to debates, informal discussions and theme work. Our library is well supplied with reference books in this department. Students are encouraged in original investigation. The labor question, socialism, taxation, money and tariff receive attention.

Laughlin's Elements. *Five hours a week during the first term.* Senior year.

Psychology.—Course C.—This study presupposes a considerable acquaintance with the structure and functions of the brain and nervous system. Students acquire this knowledge in the laboratory under the direction of the professor of Natural History. The intellectual faculties, the sensibilities and the will are carefully studied; the various schools of philosophy are criticised and compared and themes are often required from members of the class.

Halleck. *Five hours a week during the second term.* Senior year.

COURSE H.—*History of Civilization* is the subject studied in this course during the winter term of the Junior year. Here the growth of constitutional government, expansion of education, art and industries, movement of population and kindred subjects are discussed and compared. Lectures are delivered, and much original work demanded.

History and Modern Languages.

F. BERCHTOLD, A. M., Dean of College.

The study of History is begun in the Freshman Year with Myers' General History as a guide.

The class report for recitations in divisions of about thirty each, which enables the instructor to devote more attention to each individual student.

Although using Myers' History as a quasi guide, it has been our practice to give each student independent work, as much as possible, and then to subject such research to unreserved criticism and freest discussion in the class-room. This encourages originality, the mind gains power, courage, becomes keen and able to sift the essential from the nonessential. From his constant contact with concrete materials, matter outside of his textbook, he acquires the rarest of qualities—historic sympathy.

COURSE A.—*Greek and Roman History* is studied in the Freshman year, during the Fall term. Five hours a week.

COURSE B.—*Mediæval History*.—A study of the social and political institutions from the fifth to the fifteenth centuries. Five hours a week during the Winter term.

COURSE C.—*Modern History* is studied during the Winter term of the Sophomore year; five hours a week. In addition to the individual work of the student, as outlined above, lectures are given on the more important periods, viz., the Great Reformation, Thirty Years' War, English Reformation, the French Revolution, etc.

COURSE D.—*Ancient History*.—History of Eastern peoples.—A survey of the history of China and India. Religion, Arts and general culture of Egypt, Chaldæa, Assyria, Babylonia, Persia. Sophomore year; Spring term; five hours a week.

COURSE E.—*Civics*.—Practical information is presented as to the rights and duties which attach to American citizenship. Constant care is taken to give reasons as well as justification for each power exercised by our Government, and to inculcate in every way the moral obligations of good citizenship.

Willoughby, "Rights and Duties of American Citizenship." Five hours a week. Spring term, Junior year.

The College is well supplied with wall maps, and charts, and there is quite a good working library of historical reference books.

MODERN LANGUAGES.

Of the Modern Languages German and French are offered to the Junior and Senior years of the Household Science course, and to the Seniors of the Agricultural course. Students in the Mechanical course may elect either of the two.

GERMAN.—Course F.—*Elementary German*.—Collar's Eysenbach—German Grammar; translation of easy prose and poetry as contained in Hewett's German Reader. Composition. Throughout the Junior year.

COURSE G.—*Advanced German*.—Hauff's Das Kalte Herz, Fouque's Undine, Heyse's Anfang und Ende, Schiller's Wilhelm Tell; Maria Stuart; Das Lied von der Glocke. Eysenbach's Grammar continued and reviewed. Composition; Syntax. Throughout the Senior year.

FRENCH.—Course F.—*Elementary French*.—Charles F. Kraeh's Preparatory Course in French. French composition. Super's French Reader. Xavier de Maistre's Les Prisonniers du Caucase. Fleury's L'Histoire de France.

COURSE G.—*Advanced French*.—Daudet's La Nivernaise; Erckmann—Chatrian's Le Conscrit de 1813. Souvestre's Un Philosophe Sous les Toits. Victor Hugo's Quatrevingt-Treize. Kraeh's French Grammar continued. Syntax.

There will be sight reading in both German and French.

AGRICULTURE.

JAMES WITHYCOMBE, V. S., Vice-Director and Professor of Agriculture.

F. L. KENT, B. Agr., Assistant Professor in Agriculture.

MARION WOOD, B. S. A., Foreman.

This course is designed to prepare young men for practical Agriculture, and extends through the Freshman, Sophomore, Junior and Senior years, leading to the degree of Bachelor of Science.

FRESHMAN YEAR—Course A.—History, characteristics, and adaptation of the different breeds of domestic animals.

SOPHOMORE YEAR.—Course B.—The study of the general principles of drainage; laying out and construction of farm drains; the effects of drainage upon the chemical and physical conditions of the soil.

Course C.—Theoretical Dairying will be taught in the classroom, one hour each day. Instruction will be given by use of text-book and lectures.

Course D.—Consists of practical instruction in the laying out and construction of tile drains.

Course E.—The origin and formation of soils; soil tillage; management and application of manures; green manuring; organic and mineral manures; soil exhaustion; rotation of crops, and methods of improving worn-out soils.

Course F.—Practical work in the dairy for Household Science students.

JUNIOR YEAR—Course F.—Practical work in the dairy for Agricultural students.

Course G.—Stock Feeding and Breeding. Stock Feeding covers the subject of rations for milk and meat production; how best balanced for economical feeding. Stock Breeding covers the subjects of atavism, heredity, in-and-in-breeding, variation, prepotency and care of breeding animals. Opportunity is given for judging and scoring of live stock, and for studying the essential points of breeds adapted to different purposes.

SENIOR YEAR—Course I.—Veterinary Science will be taught by lectures covering the anatomy of the horse, and taking up the diseases most common to domestic animals, giving causes, symptoms, and treatment for the same. Special stress is placed upon proper treatment to prevent disease in domestic animals.

Course J.—Continuation of veterinary science.

Course K.—Agricultural Engineering. This branch will cover the location of farm buildings, arrangement of fields, and plans for construction of fences, gates and buildings.

Instruction is given largely by lectures, suitable books being selected for reference. Miles' book on drainage. Curtis' "Horses, Cattle, Sheep, and Swine." Warfields "Cattle Breeding," Stewart's "Stock Feeding." Gurler's book on "Practical Dairying." "Soil" by King. "Fertility of Soil" by I. P. Roberts.

The College and Station farm consists of 180 acres, 140 of which are devoted to farm crops, pasture, and experimental purposes. The farm is equipped with dairy building, horse-barn, cattle-barn, silos, piggery, tool-house, etc.

Opportunities are given on the farm for practical work in agriculture in connection with the instruction given in the class-room. A large portion of the work on the farm is done by students. During the first and second years, students taking the agricultural course are required to work in the mechanical shops, except the first term of each year when they will be given practical instruction in horticulture and agriculture. In agriculture will be included instruction in seeding, care of stock, plowing, harrowing, drainage and care of farm implements.

While all students in this course are required to perform more or less practical work on the farm, special effort is made to furnish work to those who show a faithful compliance with the regulations of the Institution, and who need pecuniary assistance.

Students laboring on the farm and in gardens, receive pay at the rate of 10 cents per hour. Only comparatively few persons can be so employed, as the amount of work to be done is limited. Those only who by their work prove to be valuable laborers will be retained.

DAIRYING.

One of the purposes of the State Agricultural College is to advance the business industries of the state. It is believed that dairying is one of the most important lines of work that can now be undertaken in Oregon. There is now a large body of land in the state which is especially adapted to this industry. For this reason dairying has been introduced as a branch of study in the agricultural course. A new building has been prepared for this department and it is fitted up with all the necessary machinery for carrying on the work in the most approved way. An expert is in charge of this department.

All students in the Agricultural department will be required to study dairying not only as a science but as an art. Those taking the Household Science course will have the same opportunities as the Agricultural students.

This is a line of practical work which, it is believed, will prove of great advantage both to the student and to the state.

The practical instruction includes both butter and cheese making.

A short course has been provided, as described elsewhere in this catalogue, whereby practical instruction in dairying may be obtained by those who can not avail themselves of a college course.

Mechanical and Electrical Engineering.

GRANT A. COVELL, M. E., Professor.

E. C. HAYWARD, E. E., Assistant.

D. W. PRICHARD, Instructor in Woodwork.

M. CLYDE PHILLIPS, B. M. E., Instructor in Ironwork.

Students in this department are allowed to choose either the course in Mechanical Engineering or the course in Electrical Engineering. Each course leads to the degree of Bachelor of Science, and the two courses are identical until the beginning of the Senior year.

The course in Mechanical Engineering is intended especially for young men who expect to enter an industrial vocation and for those who are already, or expect to be, connected with some of the manufacturing establishments of the country.

The course in Electrical Engineering is designed to meet the needs of those who desire to turn their attention towards electrical science, such as the design, installation and management of electric light and power plants, etc.

The following is an outline of the work in this Department:

1. SHOP WORK.—(A) *Wood-working*, including carpentry, joinery and wood-turning, also the care and use of tools, 5 hours per week. Freshmen in the Mechanical course take three terms; those in the Agricultural course take two terms. *An elective course in Wood-working* for Seniors who desire to specialize in this branch, 5 hours per week during the year. In this course special attention will be given to the care and management of Wood-working machines. (E) *BLACKSMITHING*, including forging, welding and tool-making, 5 hours per week. Sophomores in the Mechanical course take three terms; those in the Agricul-

tural course take two terms. One term of this work is also elective for Juniors in the Agricultural course. (K) MACHINE SHOP WORK, including both hand and machine work, 5 hours per week throughout the year. Required of Juniors, and elective for Seniors in the Mechanical course.

2. MECHANICAL DRAWING.—(D) A course in mechanical drawing, beginning with geometrical problems and projections, 5 hours per week during first term, and 5 hours per week during second and third terms. Required of Sophomores in the Mechanical course. A course of more advanced drawing, elective for Seniors throughout the year, 5 hours per week.

3. (J) A course in Descriptive Geometry, 5 hours per week during the first term of the Junior year, and three hours per week during the second term. The work is largely drawing, supplemented by lectures and recitations.

4. MECHANISM.—(I) Elementary Mechanism, during the Fall term of the Junior year, 5 recitations per week.

5. MACHINE DESIGN.—(W) A course in which the principles developed in Course I are applied to the design of parts of machines. Required of Seniors, 3 hours per week during the Winter term, and 5 hours per week during the Spring term.

6. STEAM ENGINES AND BOILERS.—(P) A study of the construction, care, and operation of steam engines and boilers; recitations and lectures, 4 hours per week during the third term of the Junior year. (S) THERMODYNAMICS.—The steam engine, considered as a heat engine, 2 hours per week. Required of Seniors in Mechanical Engineering during the first term.

7. MECHANICS.—A course in applied mechanics, extending throughout the Senior year. The sub-divisions are: (R) Mechanics of Engineering, (U) Strength of Materials, and (V) Hydraulics. Recitations and lectures, 5 hours per week.

The textbooks used are: Wells' Engineering Drawing and Design; Stahl and Wood's Elementary Mechanism; MacCord's Descriptive Geometry, Smith's Machine Design; Kinnealy's Steam Engines and Boilers, Wright's Mechanics, and Merriman's Strength of Materials.

The shops are well equipped with tools and machinery from the best makers in the country; the idea being not only to have the shops well supplied with the necessary tools but also to make each shop a model as regards quality and systematic arrangement.

The uses of the various tools in the shop are taught by a series of exercise pieces which the student is required to make. After completing the exercises, the regular work consists in building and repairing machinery in the machine shop, mending farm implements, and making tools in the blacksmith shop, and other useful articles in the wood shop. So far as possible, all work in the shops is executed from drawings and blue prints, which must be followed accurately.

In the drafting room the student begins with linear drawing and follows a progressive course until he is able to make complete working drawings of whole machines, and finally he is encouraged to produce designs of his own and to make complete drawings and blue prints of them.

The scientific principles involved in machines and mechanical movements are taught in the class-room, as well as the application of mathematics to problems in mechanical engineering. The student is required to solve original problems and to depend upon his own judgment and ingenuity as far as possible.

PHYSICS.

8. ELEMENTARY PHYSICS.—(L) This course includes recitations, alternating with laboratory practice, 6 hours per week during the second term of the Junior year, and $7\frac{1}{2}$ hours during the third term. Required of Juniors in the Agricultural and Mechanical courses.

This course is also elective for Seniors in the Household Science course during the second and third terms.

9. (T) A LABORATORY COURSE, offering more advanced work for Seniors in the Mechanical course, 6 hours per week during the first term.

Textbooks: Carhart and Chute, and Chute's Laboratory Manual.

10. (X) ELECTRICITY AND MAGNETISM.—Lectures, recitations and laboratory work, 7 hours a week throughout the year. Dealing with the theory of Electricity and Magnetism and its application to measurements used in engineering work. Open to students who have completed Course L in Physics.

COURSE IN ENGLISH.

J. B. HORNER, A. M., Litt. D.

MRS. IDA B. CALLAHAN, B. S.,

FRESHMAN YEAR.

General hints as to margins, paragraphing, punctuation, capitalization, and preparation of manuscripts; from one to five recitations according to attainments of class.

FIRST TERM.—Course A.—Orthography, Etymology, and Syntax; supplementary exercises.

SECOND TERM.—Course B.—Advanced Syntax, Diction, Capitalization, Punctuation, Orthography; supplementary exercises.

THIRD TERM.—Course C.—Clearness, Force, Elegance, Letter-writing, Figures of Speech, Word Analysis.

SOPHOMORE YEAR.

FIRST AND SECOND TERMS.—Courses D and E.—Textbooks: Genung's Practical Rhetoric and Rhetorical Analysis.

THIRD TERM.—Course F.—Theme-work.

JUNIOR YEAR.

FIRST AND SECOND TERMS.—Courses G and H.—Kellogg's English Literature; supplementary work from College library.

THIRD TERM.—Course I.—Smyth's American Literature with selections from the College library. The Mechanical and Agricultural students of the Senior class may elect to take during this term the work assigned in Course I of the Department of English.

Mathematics and Engineering.

GORDON V. SKELTON, C. E., Professor.

CHARLES L. JOHNSON, B. S., Assistant.

The course in Mathematics includes such of its branches as the distinctive aims of this institution require, and conforms itself, in general, to that in use in the most successful Agricultural Colleges.

That the study may to the fullest extent strengthen and discipline the mind for connected, logical thought, thoroughness and accuracy are insisted upon at all times. In the class-room all principles and demonstrations must be presented in an orderly and logical manner. The constant aim is to cultivate the powers of insight, judgment, and origination.

In Pure Mathematics the course includes Algebra, Plain and Solid Geometry, Plain and Spherical Trigonometry, Analytical Geometry, and Differential and Integral Calculus; in Engineering, Surveying, Leveling and Road-making. In each of the Engineering studies, special attention is paid to the field work. The students themselves use the instruments, make the measurements, record the field-notes, then plat and work up the notes thus obtained from actual field practice. The data for a large number of the problems solved by the classes in Trigonometry are also obtained by the students themselves who use the mathematical instruments under the personal supervision of the instructor.

The text-books used are Wentworth's Algebra, Phillips and Fisher's Geometry, Wentworth's Trigonometry, Nichol's Analytics, Taylor's Calculus, Hodgman's Land Surveying, and Gilmore's Roads, Streets and Pavements.

The Engineering department is equipped with the necessary instruments, including a railroad compass, transit with solar attachment, plane-table, Y level, hand-level, rods, chains, tapes, etc.

Chemistry and Pharmacy.

G. W. SHAW, A. M., Ph. D., Professor.

JOHN F. FULTON, B. S., Assistant Professor.

C. M. McKELLIPS, Ph. G., Ph. C., Instructor.

The study of Chemistry is begun in the second term of the Sophomore year.

A.—GENERAL INORGANIC CHEMISTRY.—*Non-metals*.—A daily exercise throughout the second term is devoted to recitation, lecture and laboratory practice. In this course special attention is given to the fundamental principles of the science, which are suitably illustrated either by experiments performed by the student in the laboratory, or, when too intricate and expensive of time, by the instructor before the class in the lecture room. The elements are discussed individually as well as their more important compounds.

The *practicum* of this course consists of a series of laboratory exercises dealing with the elements studied and is designed to introduce the student to chemical manipulation.

B.—The study of the metals is entered upon in the third term and is conducted similarly to the study of the non-metals. The more important metals are individually discussed under the following heads: history, occurrence in nature, properties, preparation, uses, tests, and compounds. Special attention is given to metals and their compounds which are of industrial importance.

The *laboratory work* of the third term consists of a study of the properties of the metals.

C.—QUALITATIVE ANALYSIS.—The student is required to apply and study the reactions involved in the ordinary methods of separation and identification of substances. The study includes the reactions, ordinarily used in qualitative analysis, but deals with only those substances usually met with in chemical work. The student repeatedly works through a scheme of separation in making qualitative analyses of unknown substances.

I. This course is intended to give practice in analyzing unknown mixtures of acids and bases *with special reference to the*

needs of the pharmacist. The material used will be largely medicinal. Required only of students in pharmacy.

D.—ORGANIC CHEMISTRY.—This is a lecture course alternating with course C in the first term of Junior year. It is designed to show the relation between the more important carbon compounds, and to familiarize the student with the compounds of common life. It is based on a syllabus prepared for the purpose. Course D is required of all students in the agricultural, household science and the pharmacy departments.

E.—AGRICULTURAL CHEMISTRY.—This course deals with the more intimate relation of the science to agriculture. The subject is taught by lectures with reference to standard works. Such topics as soil composition; the elements essential to plant growth, lime, potash, phosphates, and nitrogenous compounds; the exhaustion of soils; the chemistry of cattle foods and nutrition; the chemistry of dairy and other food products, and their adulteration, will be treated as fully as time will permit. Open only to students who have completed courses A, B, and D. *5 hours per week.*

F.—QUANTITATIVE ANALYSIS.—The student is required to make the ordinary fundamental determinations of moisture, aluminum, calcium, magnesium, copper, lead, potash, sulfuric acid, phosphoric acid, chlorin, carbonic acid by gravimetric process; estimation by volumetric methods including alkalimetry, acidimetry, precipitation, and oxidation will be undertaken. The work is so planned as to familiarize the student with the standard gravimetric and volumetric methods. This is a required course for all pharmacy students and is elective for students who have completed courses A, B, and C. *10 hours per week.*

F.—CHEMISTRY OF FOODS.—An elective extending through the Senior year in the household science course. It is an expansion of the work in course D, but limited to a study of foods from a chemical and scientific standpoint.

GRADUATE ELECTIVES.

Elective work in Chemistry is offered as a major or a minor subject for two years to candidates for a Master's degree, as follows:

ADVANCED ANALYSIS.—This course is intended for those who may desire to specialize in chemical work. It provides a greater variety of analytical work than can be given in course F. It offers such work as the following: analysis of limestone (complete) coal, iron ores, milk, butter, cheese, water, urine sugar (both volumetric and polariscopic) as well as various minerals. A student desiring to investigate along any particular line, as mineral, sanitary, agricultural, may do so. This course is open as a major subject to students who have completed courses A, B, C and F. Others who may elect Chemistry as a major subject will be assigned work in accordance with their previous attainments in the subject. Students taking a major subject in another department, with a minor in Chemistry, or students from other institutions, will be assigned to such courses in the department as their previous training may justify.

With the above course in analysis *a parallel course of reading must be taken, upon which the student will be required to pass a satisfactory examination* at the end of the year. The work of the last two terms will be left largely to the student's choice, subject to the approval of the head of the department, and will serve as the basis for a graduation thesis.

GEOLOGY.

Geology is offered as *an elective for the third term of the Senior year* to students in both the agricultural and the household science courses.

The course opens with work designed to acquaint the student with the common rocks and minerals as to their physical characters and appearance. The geological and mineralogical cabinets offer abundant opportunity for the study of specimens. The remainder of the course consists in a study of the aqueous, atmospheric, igneous, and organic agents in the earth's history; the structure and arrangement of rocks and the order of succession of strata.

Pharmacy, Theoretical and Practical.

The student begins with the first principles of pharmacy and gradually advances to the more difficult topics. It is expected that he will become thoroughly acquainted with the correct

methods of compounding both simple and complex prescriptions and making the ordinary galenical preparations. Much attention is given throughout the course to the practical side of dispensing and the student receives much individual attention from the instructor and a large amount of practical experience in the dispensing laboratory which is under the immediate charge of an experienced pharmacist.

PHARMACY.—The various processes involved in the manufacture of pharmaceutical preparations will be subjected to systematic study. The various official and unofficial preparations will then be taken up and considered separately.

The laboratory work consists of practice in the application of the processes considered in the class room. Each student will make independently a sufficient number of preparations to insure a thorough understanding of the processes and manipulation involved. Recitations, 52 hours; Laboratory, 174 hours.

MATERIA MEDICA.—Chemical and pharmaceutical substances which find use in medicine are studied one by one as to source, Latin and English names, formula, compounds and preparations, properties, preservation, industrial and domestic use, impurities and adulteration, medicinal action, antidote and dose. Recitations, 78 hours.

PHARMACOGNOSY.—In this course is considered both the gross structure and characteristics of the crude drugs and chemicals. The student is taught the appearance, taste, color, odor, fracture and habitat of the various crude drugs, and also receives careful drill on their Latin and English names. The student has access to the specimens for study, and special effort is made to train the senses to the recognition of each of the drugs considered.

The pharmacognosy of the Senior year will consist in a thorough review of the work of the Junior year and practice in the recognition of powders, liquids, chemicals, and pharmaceutical preparations. Laboratory, Junior year, 52 hours; Senior year, 36 hours.

THERAPEUTICS AND DOSES.—The therapeutical uses of medicines will serve as a basis for classifying them in a manner which will facilitate study. The student also learns the quantities in which the various medicines may be administered.

In the Senior year the physiological uses and doses of the more important drugs and poisons will be taken up and discussed

in order. Special attention will be paid to the doses, effects and antidotes for the more important poisons. Recitations, Junior year, 24 hours; Senior year, 36 hours.

NOMENCLATURE.—A recitation course on the Latin titles of the Pharmacopœia, National Formulary, etc. Recitations, 12 hours.

OPERATIVE PHARMACY.—This course is a continuation of that in Pharmacy in the Junior year. It will include the preparations of the Pharmacopœia not considered in the Junior year. Attention is given to the more difficult galenical preparations and the newer classes of remedies, elegant preparations, toilet articles, etc.

A large amount of work is required in the manufacture of difficult galenical preparations; also cachets, soft capsules, compressed tablets, triturates, and toilet articles. Recitations, 36 hours; Laboratory, 108 hours.

PRESCRIPTION WORK.—The recitation work will consist of reading, interpreting, correcting, transposing, and calculating doses. Special attention will be given to incompatibilities and to the solubility of chemicals. Unsightly, dangerous and explosive mixtures will also be considered under this head.

In this laboratory course and that of operative pharmacy the student gains the experience for the prescription counter, learning the difficulties there met with and how best to overcome them. He also gains in manipulative skill in making extemporaneous preparations.

Each student is required to personally perform the operations under the direct supervision of the instructor. *The student works not from book prescriptions, but from prescriptions written in the ordinary practice of physicians and found on file in the drug stores.*

URINALYSIS.—A course in the chemical analysis of urine consisting of both a qualitative and a quantitative determination of ingredients in normal and pathological urine. Laboratory, 40 hours.

PHARMACEUTICAL ANALYSIS.—Under this head is taken up the separation, identification and determination of the active constituents of alkaloidal drugs; also the identification of the more important organic compounds. Recitations and Laboratory, 200 hours.

Special Lectures.

From time to time special lectures will be given on hygiene, pharmaceutical jurisprudence, etc.

State Examination and Registration.

At its meeting held on December 14, 1898, the Oregon State Pharmacy Board passed the following resolutions endorsing the course here offered:

WHEREAS, The Oregon State Agricultural College has established a course in Pharmacy and Chemistry that meets with the hearty approval of this Board, inasmuch as it offers a large proportion of practical work; therefore, be it

Resolved, That the Oregon State Board of Pharmacy acting in accordance with Sections 5 and 6 of the Oregon Pharmacy Law as amended, grant to students of the Oregon Agricultural College, who complete the full course and hold a diploma from said institution, after they shall have been subjected to such examination, at Corvallis Oregon, as this Board may approve, on the completion of the senior year, a certificate to act as a registered pharmacist in this State.

Provided, That any student who may have taken the last two years of the course only and who does not hold the regular diploma from the said institution, on passing the examination aforesaid shall only be granted the certificate of a registered assistant.

The training in the pharmaceutical course will be largely conducted in the laboratory for it is only by this means that the student can form an intimate personal acquaintance with the material and the best methods of manipulation. Thus it is that he receives systematic practice in dispensing, in the examination of drugs as to identity, purity, and strength, and in the manufacture of various preparations from crude drugs. The requirements of the U. S. Pharmacopœia are always kept in mind, and the student is always held strictly responsible for the purity of his preparations and the accuracy of his work. The course aims to teach students facts and principles of immediate use in the drug store, adapting the work to the needs of the practical pharmacist and manufacturing chemist. It is, however, further recognized that a thorough foundation must be laid for this work, and in view of this, two years of preparatory work are required in the college, or its equivalent in some other school. *Students who have had equivalent work elsewhere* can complete the course in pharmacy in two years.

Expenses.

Neither tuition nor incidental fees are charged at this institution, but to cover the cost of material used and wasted in the laboratories a small laboratory fee and a deposit for breakage will be charged in the chemical and pharmaceutical laboratories as is the custom in all institutions. *These fees are payable each term strictly in advance.*

Chemical Laboratory: Sophomore and Junior Years:

Material.....	\$1.50
Deposit for breakage.....	1.50

Senior Year:

Material.....	\$2.50
Deposit for breakage.....	1.00

Pharmaceutical Laboratory:

Material.....	\$2.50
Deposit for breakage.....	1.00

Zoology, Entomology and Physiology.

A. B. CORDLEY, B. S., Professor.

Laboratory work is the basis of all instruction in this department. Textbooks, lectures and reference works are used as aids, but the aim is, so far as possible, to lead the students to base their conclusions upon observed facts. The department is well equipped with charts, models, skeletons, mounted and alcoholic specimens, etc., for illustrating the subjects taught; and is provided with an excellent laboratory equipment, consisting of individual tables, compound microscopes, dissecting instruments and other necessary appliances sufficient for twenty students.

1. *Elementary Zoology*.—Course A—Laboratory work with the lower forms of life. Required of students in Agricultural and Household Science courses. Spring term, Sophomore year, 7½ hours per week.

2. *Vertebrate Anatomy*.—Course B—A comparative study of several vertebrate types. This course is preparatory to the following term's work in Physiology and to the work in Veterinary Science. Required of students in Agricultural and Household Science courses. Winter term, Junior year, 7½ hours per week.

3. *Physiology and Hygiene*.—Course C—Experimental laboratory work, with lectures. Before taking this course students in the Agricultural and Household Science courses must have taken the courses in Elementary Zoology and in Vertebrate Anatomy, or furnish satisfactory evidence of having had equivalent instruction elsewhere. Required of students in all courses. Spring term, Junior year, 5 hours per week.

4. *Entomology*.—Course D—Laboratory work on structure of insects, with practice in collecting and mounting them. Lectures on injurious insects and insecticides. Required of students in Agricultural and Household Science courses. Fall term, Junior year, 7½ hours per week.

The following advanced courses are elective for those who have completed the preceding courses, or who have had equivalent instruction elsewhere. All students taking these courses will be expected to present an acceptable thesis on some subject pertaining to course elected, before graduating. The subjects for thesis work must be determined by consultation with the head of the department.

5. *Vertebrate Anatomy* (Morphology and Histology).—Laboratory work preparatory to a course in Medicine or Veterinary Science. Throughout the Senior year, 10 hours per week.

6. *Economic Zoology*.—Students electing this course will select some animal, or small group of animals, and study it, principally from the economic standpoint. Throughout the Senior year, 10 hours per week.

7. *Advanced Entomology*.—Students electing this course will select some particular insect, or group of insect pests, for their major work. Throughout the Senior year, 10 hours per week.

BOTANY.

E. R. LAKE, M. Sc., Professor.

Laboratory and field exercises are the chief features of the work of this department. Textbooks and reference books are used merely as guides, or for the purpose of furnishing suggestions to the student that he may be enabled to make his field, garden, greenhouse and laboratory work the more effective.

Course A—*Plant Elements*.—The study of the superficial structure and organs of flowering plants—gross anatomy. In the work of this course the student becomes familiar with the terms used in describing our common flowering plants and their various external parts. Laboratory and field work with daily recitations covering the observations made. Laboratory deposit, \$3.00. Text, Gray's Lessons.

Course B—*Plant Histology*.—Laboratory work with the dissecting and compound microscopes. The exercises of this course cover the minute structure of the higher plants and their tissues, together with a brief consideration of the lower forms of plant life. Laboratory deposit, \$3.00. Text, Barnes' Plant Life.

Course C—*Plant Physiology*.—The subject of this course is considered with special reference to the needs of the agriculturist and horticulturist and hence those phases that have particular bearing upon our cultivated crops are given the weight of the discussion. Laboratory fee, for breakage. Text, Sorauer, Physiology of Plants. Reference, Sachs, Strassburger.

Course D—*Plant Pathology and Hygiene*.—Laboratory and field work supplemented with lectures and recitations. The common fungous foes of the cultivated field, orchard and garden crops, together with the means of prevention and remedy are considered at some length. References, Lodeman, Weed and others.

Course E—*Forestry and Arboriculture*.—Forest areas and their type trees: Forest planting, preservation and laws. Trees, their care, culture, and products. Pacific coast forests and their importance as wealth producers.

Course F—*Plant Products*.—Economic plants and their preparations and uses. History, development, and distribution of the plants that furnish the world with its chief supply of material for food, shelter, clothing, fuel, medicine and the arts.

Course G—*Systematic or Cryptogamic Botany*.—The work of this course is arranged to meet the needs of those electing it. In the systematic work, the student is required to collect and arrange a century or more of the local flora together with ample data covering the habitat, manner of growth and distribution of the species.

In the cryptogamic work, the exercises are chiefly confined to a study of the comparative morphology and biology of the fungi, algæ and other flowerless forms of plant life.

The laboratory deposit in Courses A, B and C is a sum set aside to cover possible cost of loss or breakage of the apparatus used. At the close of the work of the course such balance as may remain, (and with careful use, that would be 5-6 of the deposit), is returned to the student.

HORTICULTURE.

E. R. LAKE, M. Sc., Professor.

GEORGE COOTE, Florist and Gardener.

Course A—*Plant Propagation*.—The student is given house and field exercises in seeding, grafting, cutting, layering and budding. Text, How to Propagate Plants.

Course B—*Plant Growing*.—The work of this course includes lectures and recitations on garden and orchard crops, including planting, cultivating, pruning, harvesting, storing and marketing our leading vegetables and fruits. Text, Bailey's Principles of Fruit Growing.

Course C—*Floriculture*.—This course covers the practical work in propagating and cultivating plants for window, greenhouse and outdoor decoration.

Course D—*Plant Improvement*.—Lectures and recitations covering the principles of plant breeding by selection and cross-fertilization. Text, Bailey's Plant Breeding.

Course E—*Landscape Gardening*.—Lectures and recitations on the principles of home improvement. Plants and their uses and abuses in adorning the grounds of city, suburban and country homes. Text, Maynard's Landscape Gardening.

Course F—*Plant Evolution*.—Lectures and recitations covering the various phases of evolution as pertaining especially to cultivated plants. Text, Bailey's Evolution of Native Fruits. Reference, Campbell's Evolution of Plants.

Household Science Course.

MISS MARGARET C. SNELL, M. D., Professor.

MRS. MARY AVERY, Assistant in Sewing Department.

Self interest, and public interest, make it apparent to every intelligent person how greatly in need are subjects pertaining to the home of being "touched to fine issues;" hence their introduction as studies into College Curriculums.

We have been reviled as "the most common schooled, and least cultivated, among all civilized nations," and this largely through our deplorable indifference to, and ignorance of, the common facts and necessities of life.

The home as we find it to-day has scant warrant that anything born of its teaching is worth while to impart, yet the problem grows of how to get better results, how to lessen the labor of farmers' wives, the washer-woman, the cook, the boarding-house keeper, the city missionary, the school teacher, the woman of fashion.

The solution requires something more than the knitting of the brow over theories; there must be actual testing of these theories by practice in the College laboratory, if they are to have value and permanence. The precious acquisitions of the scholar who *knows*, must be further supplemented by that of the artist who *does*.

HOUSEHOLD SCIENCE WORK.

FRESHMEN YEAR.—*First Term*.—Course B.—Four sewing lectures and practice work, one hour a day, on sewing samples. Here are acquired and strengthened those invisible impulses, industry, dexterity, patience, exactness.

Good health is acknowledged as one of the prime factors of success in life; lectures and talks on this important subject are not neglected. The amenities of home, and readings on kindred topics, give mental occupation to the sewing hour.

Second Term.—Course B.—Sewing continued; lectures and talks on Social Forms and Usages, the Art of Entertaining, readings on the Art of Conversation. Mahaffy.

Third Term.—Course B.—Sewing, the making of Simple Garments; Readings, Conversation.

SOPHOMORE YEAR.—Cleverness with scissors, tape line, and needle finds in dress-making, millinery, home furnishing, a large field for the application of art principles to the living, moving canvas of actual life.

The department of Dressmaking has been necessarily restricted for a few years through lack of funds to carry on this most important branch of domestic science as thoroughly as the needs of the Institution require. The work will proceed this year on a more scientific basis. Lectures will be given on the following subjects: The methods of manufacturing thread, cloths and other dressmaking material; Hygienic principles of dressmaking; study and sketching of drapery; history of costume, etc.

First Term.—Draughting and making simple skirt, cutting, fitting and making lined waist from pattern; a study of the texture of goods, 5 hours.

Third Term.—Draughting and making lined waists, matching stripes and plaids, study of woolen textiles, 10 hours.

JUNIOR YEAR.—*First Term*.—Course M.—Cookery, (canning of fruits, one-half term). Three lectures. One hour a day practice work in the kitchen laboratory- Technological Cookery. Preparatory work in Chemistry of Foods. One-half term.

Second Term.—Course M.—Practice work in Cookery, 4 hours per week.

Third Term.—Course M.—Practice work in Cookery, 3 hours per week.

SENIOR YEAR—*First Term*.—Special Hygiene, Course R, 3 hours; Aesthetics, Course R, 4 hours; Needle Work, Course S, 5 hours.

Second Term.—Sanitary Science, Course R, 1 hour; Aesthetics, Course R, 4 hours.

Third Term.—Home Furnishing, Course V, 3 hours; Emergency Lectures, Course V, 1 hour.

Military Science and Tactics.

Cadet Major E. J. LEA, Instructor.

Instruction in this department is both theoretical and practical, and is required by the Act of Congress which contributed so large a part of the College endowment. All the students, not physically incapacitated from bearing arms, are required to take this course.

Theoretical instruction is given to the Senior and Junior classes and to all officers and non-commissioned officers of the college battalion. It includes recitation in infantry drill, the school of the soldier, company, and battalion, in close and extended order, guard duty, and a course of lectures on the duties of guards and sentinels, the army regulations, the organization and administration of the army, and the elementary principles of the art of war. The practical instruction consists in the daily drills in the school of the soldier, company, battalion, battalion ceremonies, battle tactics, and guard duty.

Textbooks: Infantry Drill Regulations, U. S. Army; Burnham's Duties of Outposts; Manual of Guard Duty, U. S. Army. Elements of Military Science—Wagner.

Experience has also demonstrated that the drill furnishes excellent physical culture, insures regular and healthful exercise, secures a graceful carriage and dignified bearing, and cultivates the habit of prompt obedience, self-control and the power to command.

The male students are organized into an infantry battalion consisting of three companies, and a military band of seventeen pieces. The cadet officers are selected for proficiency in soldierly attainments, good deportment, and scholarship. They are expected to be examples in military deportment and general good

conduct, and, when on duty, their orders are required to be obeyed. The exercise of military authority is, for the cadet officers, an excellent mental discipline.

The following are the officers of the military organization :

BATTALION STAFF.

Cadet First Lieutenant and Adjutant N. R. Smith.
Cadet Sergeant Major..... C. A. Saunders.

COLOR GUARD.

Cadet Color Sergeant Jas. Van Groos.
Cadet Color Corporals R. Gilstrap, T. P. West.

COMPANIES.

<i>Rank.</i>	<i>"A."</i>	<i>"B."</i>	<i>"C."</i>
Cadet Captains.....	R. H. Howell.....	W. L. Patterson.....	H. A. Scoggin.
First Lieutenants.....	F. A. Edwards.....	J. F. Huffman	L. T. Powers.
Second Lieutenants.....	L. W. Murray.....	W. H. Beach.....	H. W. McBride.
First Sergeants.....	R. D. Burgess.....	M. C. Williams.....	J. G. Elgin.
Second Sergeants.....	F. C. Walters.....	Robt. McKee.....	A. Kruse.
Third Sergeants.....	J. C. McCaustland..	A. H. Frazier	H. E. Buxton.
Fourth Sergeants.....	H. Davis.....	A. R. Woodcock.....	A. L. Yoder.
Fifth Sergeants.....	E. B. Aldrich.....	H. E. Penland.....	A. J. Bier.
First Corporals.....	R. Barclay.....	A. Campbell.....	S. Herbert.
Second Corporals.....	H. E. Junkin.....	W. R. Dilley.....	J. McBride.
Third Corporals.....	E. R. Shepard.....	F. Ward.....	W. L. Sharp.
Fourth Corporals.....	C. F. Hawley.....	W. W. Garrow	M. F. Bridges.

BATTALION BAND.

Cadet First Lieutenant and Leader H. Beard.
Drum Major, Cadet Sergeant..... I. R. Daniel.
Cadet Sergeants—T. E. Palmer, G. Winslow, F. Kruse.
Cadet Corporals—E. W. Redd, C. A. Riddle, J. G. Garrow, J. Wiley.

Freehand Drawing.

E. F. PERNOT, Professor.

MISS DOROTHEA NASH, B. H. E., Assistant.

All students in the Freshman Year are required to take Freehand Drawing as follows :

First Term—Course A.—Elementary Drawing, with lectures, five hours per week.

Second Term.—Object Drawing, three hours per week.

Third Term.—Mechanical Course.—Object Drawing from mechanical subjects, five hours per week.

Third Term.—Household Science Course.—Drawing from casts, five hours per week.

SENIOR YEAR—Course B—*Third Term.*—Advanced Drawing (elective), ten hours per week.

No branch of education is more elevating or important than that of Free-hand Drawing, in that it cultivates the power of observation and trains the eye and hand. It is also an important aid in the study of all other branches; its value is appreciated in after life in every business, in all industries, and professional pursuits.

Department of Music.

MISS DOROTHEA NASH, B. H. E., Instructor.

The value of music as a factor in educational training is daily becoming more and more recognized. Not only does it develop the æsthetic side of our nature, and by its language imbue an increased love of the beautiful, but by the modern way of committing all kinds of music to memory proves a means of strengthening the mind and training the intellect, which is not to be surpassed by any of the older and more established methods.

The Board of Regents have added an instructor on the piano to the teaching staff for the benefit of those students who desire to add this study to the usual course.

Facilities will be afforded in the Young Women's Hall for such students as may desire to take lessons, for which a charge of 50 cents a lesson, or \$2 a month for one lesson a week, will be made.

Each of the Halls is furnished with a piano for practicing.

A public recital is given at the end of the year by pupils, and it is the intention to give one at the end of each term of the coming year, such appearances being of great value to the pupil.

The pieces and studies given are those that are used in Germany and in the best schools of piano instruction in America.

This method pays great attention to the development of a good technique in the student, proper tone production and phrasing; and by study of the different composers a true love and appreciation of good music is inculcated in the student.

ELOGUTION.

MISS HELEN V. CRAWFORD, B. S. Professor.

It is the design of this department to train the students to become intelligent and thoughtful readers. The individuality of the students is of the first importance. He is not made a slave to arbitrary rules, or allowed to become an imitator of his teacher; but he is taught to express his thoughts, convictions and emotions in accordance with his own temperament.

PHYSICAL CULTURE.

No one's occupation will supply the need of physical culture. If the work is manual, some muscles will be over-developed at the expense of the nerve centers. The peculiar excellence of the Emerson system of physical culture lies in the fact that it rapidly strengthens the nerve centers and vital organs; and at the same time develops grace and muscular strength.

VOICE CULTURE.

Gladstone says, "Many a man now in obscurity might rise to the highest rank, if he were far-seeing enough to train his voice and body as well as his mind."

The system of voice culture taught in this department takes away all impurities of the voice, giving it fullness, volume, smoothness, flexibility, sympathy and power. A voice so cultivated can be used for hours without becoming hoarse or fatigued.

COURSE OF STUDY.

FRESHMAN YEAR.—Course A.—Physical and Voice Culture, Animation of Voice, Smoothness of Voice, Analysis, Rendering, two hours per week. Textbook, Vol. I, Evolution of Expression by C. W. Emerson.

Course B.—Physical and Voice Culture, Volume of Voice, Forming the elements, Analysis, Rendering, Elementary Gestures, two hours per week. Textbook, Vol. I, Evolution of Expression.

SOPHOMORE YEAR.—Course C.—Physical and Voice Culture, Slide, Vital Slide in Volume, Forming Pictures, Analysis, Rendering, Gestures, five hours per week. Textbook, Vol. II, Evolution of Expression.

SENIOR YEAR.—Course D.—Physical and Voice Culture, Literary Analysis, Vitalized or Animated Pictures, Taste, Relation of Values, Gesture, Pantomime, two hours per week. Textbook, Vol. III, Evolution of Expression.

Short Course.

This course is designed to meet the requirements of a large number of men and women in the State who have not the time or the means to take a full College course, and yet are desirous of obtaining a better equipment for their life-work than they now possess.

The course is given in the Winter, for at this season the time can be better spared from the farm and orchard than at any other period. While the time will be subject to change to fit the regular College work, yet the course will be arranged to begin about the second week in January of each year, and extend over a period of four to six weeks.

No special preparation is necessary as the instruction will be given by lectures and laboratory work. No examination is required to enter the course and no textbooks are used. It is the aim of this course to give the student the largest possible amount of practical information regarding the various phases of Agriculture and Horticulture. Special attention is given to Practical Dairying.

The Institution is well equipped for work in these lines. Laboratories, dairy building, green house, and farm, all afford efficient means for illustration and work.

In addition to the course outlined, there are provided special lectures by practical men who have achieved success in some particular branch of Agriculture or Horticulture, or some other important industry of the State. These special lectures are provided without extra cost to the student, and are highly instructive and beneficial.

No tuition fee will be charged in this course. Those who attend will be expected to secure boarding places in the city or in the boarding halls of the College, provided these are not fully occupied by regular College students.

Reduced fare on all railroads in the State will be secured for those who attend this course.

For further information regarding this course application should be made to the President of the Institution, or to the Vice Director.

Station Staff.

Thomas M. Gatch, A. M., Ph. D.	<i>President of the College and Director.</i>
James Withycombe, V. S.	<i>Vice Director and Agriculturist.</i>
A. B. Cordley, B. S.	<i>Entomologist.</i>
E. R. Lake, M. S.	<i>Horticulturist and Botanist.</i>
George Coote	<i>Florist and Gardener.</i>
G. W. Shaw, A. M., Ph. D.	<i>Chemist.</i>
John F. Fulton, B. S.	<i>Assistant Chemist.</i>
C. M. McKellips, Ph. C.	<i>Assistant Chemist.</i>
F. L. Kent, B. S. Agr.	<i>Assistant Agriculturist and Dairy Instructor.</i>
E. F. Pernot	<i>Bacteriologist.</i>
T. H. Crawford	<i>Clerk and Purchasing Agent.</i>

The work of the Station is an important feature of the institution. Bulletins are issued, giving such information as is thought to be of interest and importance to the public, and copies are forwarded to applicants free of charge.

Farmers' Institutes.

Farmers' Institutes will be held in different sections of the State during the year, under the general management of the College authorities. It is the plan of the committee having the matter in charge to reach every section of the State during a series of years.

At these institutes papers are read and topics are discussed by persons having extensive experimental knowledge of the topics, as well as by those who have made a scientific study of the subjects.

Both the papers and addresses should be fully discussed by those present. Thus the College and the Experiment Station are brought into touch with the business industries of the State.

Institutes have been held in the following counties during the past year: Marion, Linn, Union, Umatilla, Wasco, Benton, Washington, Lane, Multnomah, Clatsop, Jackson, Josephine, Douglas and Wallowa.

Course of Lectures.

In addition to the regular lectures given in the various departments by members of the Faculty, the following course of lectures, which proved to be exceedingly popular, was had at convenient intervals during the year:

"Ideals"—Dr. J. M. Beardsley, Louisville, Ky.

"Some Snow Mountains"—President P. L. Campbell, State Normal School, Monmouth.

"The Trans-Mississippi and International Exposition; Its Benefits to Oregon"—Hon. Henry E. Dosch, Portland.

"Visit to Alaska"—Hon. Benton Killin, Portland.

"Expositions and their Benefits"—B. S. Pague, LL. B., Portland.

"Prunes and their Evaporation"—H. W. Williamson, Portland.

"The Laws Governing Public Lands"—Hon. Wm. Galloway, Oregon City.

"The Prune and its Management"—R. D. Allen, Silverton.

"London, Ancient and Mediæval"—Hon. Wallis Nash, Nashville.

"Our Constitutional Right to hold Colonies"—President Willis C. Hawley, Willamette University, Salem.

NOTES.

These lectures bring young people in contact with the leaders in the various departments of human endeavor.

They arouse investigation on current topics.

They stimulate students to emulate the achievements of specialists.

They give breadth of scholarship to the student and aid in developing the character of the Institution.

They rank among the most attractive features of College life.

They are free to all students.

The College Library.

The College library contains five thousand volumes of suitable books, also two hundred magazines and journals, to all of which the students have free access. The library is catalogued, and a topical index, that will prove very helpful to those reading along special lines, has been begun. Almost any book in the library may be taken home by the student for two weeks, at the expiration of which time the order may be renewed for a similar period. The daily attendance at the library varies from eighty to one hundred persons; and it is a matter of common observation that young people, many of whom come to the Institution without a taste for reading, cultivate an acquaintance with the authors, become familiar with the best works, and give unmistakable evidences of growth and culture.

Cauthorn Hall.

Cauthorn Hall, commonly known as Young Men's Hall, will be placed under the management of Professor and Mrs. J. B. Horner.

The building, which is comfortable and well provided with water, steam heat, and electric lights, is large enough to accommodate one hundred students.

During the coming year, Cauthorn Hall will be conducted on the Club plan. The Board of Regents will charge a nominal fee for rent and electric lights. The expense of living at the Hall will therefore be but little more than the actual outlay for help, wood, groceries, vegetables, etc. The maximum cost is not to exceed the present rate of \$2.50 per week.

To become a member of Cauthorn Hall it will be necessary for the applicant to give satisfactory evidence of his ability to govern himself. To join the Club prior to January 1, he will be required to pay in advance a fee of ten dollars; to join after January 1 and before April 1, eight dollars; to join later than April 1, five dollars. This fee will be set aside for wood, rent, lights and repairs of his room; and the unexpended portion of the fee for this purpose will be returned to the student at the close of the year or at

the expiration of his membership. It will also be necessary for him to pay upon entrance and on or before the first day of each succeeding calendar month during his membership with the Club ten dollars to be used in defraying other necessary expenses. At the close of each month the unexpended balance of this fund will be applied to the reduction of such fund to be paid for the succeeding month.

Each room of the Hall is furnished with a table, chairs, a chest with drawers, a bedstead, springs, mattress, pillow and mirror. Hence the student is expected to furnish four sheets, two pillow cases, blankets, quilts, towels, broom, dustpan, washbowl and pitcher, comb, brushes, tumblers, carpet or matting, pictures and other things that will make his room comfortable and homelike. He should bring a dictionary and such other books as are used for study, for reference, and for profitable entertainment.

The Hall is furnished with a reading room which is supplied by the Club with some choice current literature. During the year, there will be an effort made to secure the nucleus of a library; and the probability is that the Club will from year to year set aside a small amount to be used as a library fund. Suitable books contributed to Cauthorn Hall Library will be gratefully accepted by the Club.

For further particulars address Professor J. B. Horner.

Young Ladies' Hall.

The Women's Hall will be continued the coming year as a Club, under the management of Miss Snell, the immediate charge being delegated to a competent assistant.

A circular, stating price of board and containing detailed information regarding all necessary matter, will be issued early in July of this year and may be had on application to the College Clerk.

The Hall is healthfully located, lighted by electricity, and supplied with excellent water. A tennis court adds an additional attraction to the Hall grounds, and provision for other out-door sports will be consummated the coming year.

Applicants for rooms must present certificates of good character from some reliable reference.

Admission.

There is no Preparatory Department now connected with this institution. Tuition is free.

CONDITIONS OF ADMISSION.

To enter the Freshman year the applicant must be at least fifteen years of age, and must be able to pass a satisfactory examination in Reading, Spelling, Geography, Arithmetic (written and mental), United States History and English Grammar.

Those applicants who have completed a highschool course will be given proper credit for work accomplished, and all those who have finished a course in certain approved grammar schools, a list of which is given below, will be admitted to the Freshman year on presentation of their diplomas.

SPECIAL STUDENTS.

Provision is made as follows to accommodate students who do not wish to enter the regular College course:

Non-graduate, special students who may desire to attend regular classes in any department may do so on recommendation of the head of the department and the consent of the President.

Such special students must be at least eighteen years of age, and shall not be considered candidates for graduation.

Students will be admitted at any time to advanced classes on passing an examination upon the preceding subjects.

Admission from other Colleges.—Students from other colleges must show a certificate of good standing, or of honorable dismissal, from such institution. Such applicants will receive credit for studies pursued in any college authorized to confer degrees, so far as the two courses are equivalent, upon presenting a certificate of standing from the proper officers.

Accredited Schools.

Graduates from the following accredited schools will be admitted to the Freshman year without examination:

Albany,	Independence,
Astoria,	Jacksonville,
Ashland,	Junction City,
Athena,	Klamath Falls,
Baker City,	La Grande,
Bandon (Major Course),	La Creole Academy,
Bishop Scott Academy,	Marshfield,
Corvallis,	McMinnville,
Cottage Grove,	Medford,
Coquille Collegiate Institute,	North Yamhill,
Elgin,	Oregon City,
Enterprise Academy,	Pendleton,
Eugene,	Portland,
Forest Grove,	Park Place,
Grant's Pass,	Salem,
Harrisburg,	Santiam Academy,
Halsey,	The Dalles,
Huntington,	Union,
Heppner,	Wasco.
Hood River,	

The above list is subject to annual revision.

Rules.

All absences will be charged from the first recitation of the term.

Whenever the college life of any student is such that his influence, directly or indirectly, is injurious to the work of the Institution, he will be relieved from further attendance at the State Agricultural College.

The College does not undertake to prescribe in detail either its requirements or prohibitions. Students are met on a plane of mutual regard and helpfulness. Our appeal is to a proper sense of the proprieties of life and the necessity of organization on such a basis.

Established by a government that recognizes no distinction of religious belief, the Oregon Agricultural College seeks neither to promote any creed nor to exclude any; but it will always do everything in its power to promote the religious spirit and life.

Societies.

The students maintain several literary Societies, three for the young ladies and three for the young gentlemen. These Societies are of a semi-fraternal nature, offering to their members social as well as literary advantages. The exercises consist principally of essays, declamations, debates and music. Public and joint meetings are held by permission of the Faculty. A College paper, published monthly, is edited by the Societies. Many other features of college life, social and literary, are under their supervision. Students are elected to membership by those already belonging to the Societies.

The following is a list of the different Societies now in existence:

For young ladies: Sorosis, Pierian, Feronian.

For young men: Amicitia, Jeffersonian, Philadelphian.

The membership number of each of these Societies is limited to 40. They are all in a flourishing condition.

Athletic Association.

The students of the College maintain an Athletic Association which is governed by the following rules and regulations:

1. The Athletic Association of the College shall have immediate charge of, and be responsible for, the proper conduct of all athletic games of the College, under the supervision of the Athletic Committee of the Faculty.

2. A candidate for any position on an athletic team, bearing the colors and name of the Oregon Agricultural College, shall be of good moral character, shall not fall below a passing grade in more than one study, and shall have matriculated during the first month of the college year, or at least three months before applying for membership on such team.

3. A committee on athletics, composed of three members of the Faculty shall have general supervision over all athletics of the College.

4. All action of athletic clubs must be referred to the committee for their approval.

5. All trainers employed by the clubs of the College must be of good moral character, and must be approved by the athletic committee.

6. No inter-collegiate, or other, contests shall be entered into without consent of the athletic committee.

7. In all athletics provision must be made by the athletic association to meet all expenses, whether for general or special athletics, so that the College name will not be involved in any way with bad debts.

8. No student who is excused from industrial work, or military drill, on account of physical disability, shall be allowed to engage in college athletics.

College Barometer.

In March, 1896, the literary societies of the College began the publication of a monthly periodical, the "College Barometer." The enterprise met with a marked success, and the paper, controlled entirely by students, now wields a strong influence in all College affairs. During the coming year every effort will be made to improve it and make it of interest not only to those directly connected with the school, but to all who are in touch with literary, scientific and industrial education. The editors will be pleased to receive news of Alumni and any other persons formerly connected with the College. Brief, pointed notes, accounts of scientific experiments and discoveries, and short, well-written and instructive literary articles are also solicited.

The subscription price will be seventy-five cents per school year. Advertising rates will be given on application.

Address all correspondence to

E. B. ALDRICH, Editor-in-Chief, or
GLEN N. WINSLOW, Business Manager.

COMPARATIVE STATEMENT OF ENROLLMENT.

<i>Year.</i>	<i>Preparatory.</i>	<i>Freshmen.</i>	<i>Sophomores.</i>	<i>Juniors</i>	<i>Seniors</i>	<i>Graduate Students.</i>	<i>Special.</i>	<i>Total.</i>
1888-1889.....	36	33	14	14	0	0	0	99
1889-1890.....	67	55	17	6	0	6	0	151
1890-1891.....	76	83	24	15	0	3	0	201
1891-1892.....	86	63	28	19	9	3	0	208
1892-1893.....	98	123	31	18	7	5	0	282
1893-1894.....	36	103	71	21	5	4	0	240
1894-1895.....	47	85	64	52	13	0	0	261
1895-1896.....	80	175	63	54	9	14	2	397
1896-1897.....	.....	157	80	29	17	11	25	317
1897-1898.....	.....	151	75	45	26	15	24	336
1898-1899.....	.....	164	79	30	36	15	14	338

List of Examiners for Admission to the College.

The graduates of this Institution, whose names appear below, will kindly conduct entrance examinations for applicants residing in their respective counties or districts:

Hon. J. K. Weatherford, Albany, Oregon.

Superintendent George Denman, for Benton County.

Austin T. Buxton, Forest Grove.

Chas. S. Chandler, Baker City.

Verna A. Keady, P. O. Box 818, Portland.

Effie Willis, Marshfield.

Mary E. Smith, Astoria.

Lena Willis, Roseburg.

Arthur C. Lewis, Klamath Falls.

Lester M. Leland, Pendleton.

ANNUAL CATALOGUE
OF THE
AGRICULTURAL COLLEGE
OF THE
STATE OF OREGON
FOR
1899-1900
AND
ANNOUNCEMENTS FOR 1900-1901.

CORVALLIS, OREGON.

AGRICULTURAL COLLEGE PRINTING OFFICE.
GEO. B. KEADY, PRINTER,
1900.

CALENDAR--1900-'01.

SEPTEMBER.							JANUARY.							MAY.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
...	...	...	...	...	...	1	...	...	1	2	3	4	5	...	...	...	1	2	3	4
2	3	4	5	6	7	8	6	7	8	9	10	11	12	5	6	7	8	9	10	11
9	10	11	12	13	14	15	13	14	15	16	17	18	19	12	13	14	15	16	17	18
16	17	18	19	20	21	22	20	21	22	23	24	25	26	19	20	21	22	23	24	25
23	24	25	26	27	28	29	27	28	29	30	31	...	...	26	27	28	29	30	31	...
30	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

OCTOBER.							FEBRUARY.							JUNE.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
...	1	2	3	4	5	6	...	...	...	...	...	1	2	...	...	...	...	...	...	1
7	8	9	10	11	12	13	3	4	5	6	7	8	9	2	3	4	5	6	7	8
14	15	16	17	18	19	20	10	11	12	13	14	15	16	9	10	11	12	13	14	15
21	22	23	24	25	26	27	17	18	19	20	21	22	23	16	17	18	19	20	21	22
28	29	30	31	...	...	...	24	25	26	27	28	...	...	23	24	25	26	27	28	29
...	...	...	...	...	...	...	...	...	...	...	...	...	...	30	...	...	...	...	...	...

NOVEMBER.							MARCH.							JULY.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
...	...	...	...	1	2	3	...	...	...	...	...	1	2	...	1	2	3	4	5	6
4	5	6	7	8	9	10	3	4	5	6	7	8	9	7	8	9	10	11	12	13
11	12	13	14	15	16	17	10	11	12	13	14	15	16	14	15	16	17	18	19	20
18	19	20	21	22	23	24	17	18	19	20	21	22	23	21	22	23	24	25	26	27
25	26	27	28	29	30	...	24	25	26	27	28	29	30	28	29	30	31	...	...	...
...	...	...	...	...	...	...	31	...	...	...	...	...	...	...	...	...	...	...	...	...

DECEMBER.							APRIL.							AUGUST.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
...	...	...	...	...	...	1	...	1	2	3	4	5	6	...	...	...	...	1	2	3
2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10
9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17
16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24
23	24	25	26	27	28	29	28	29	30	...	...	...	...	25	26	27	28	29	30	31

CALENDAR.

FIRST TERM.

Entrance Examinations for Freshmen, Friday and Saturday, September 21-22, 1900.

Matriculation, Monday, September 24, 1900.

Work of Term begins Tuesday, September 25, 1900.

Term closes Friday, December 21, 1900.

SECOND TERM.

Term begins Wednesday, January 2, 1901.

Term closes Friday, March 22, 1901.

THIRD TERM.

Term begins Monday, March 25, 1901.

Term closes Friday, June 7, 1901.

Baccalaureate Sermon, Sunday, June 9, 1901.

Commencement Day, Wednesday, June 12, 1901.

NOTE.—The standings of students will be sent to parents or guardians on application to the President or the Dean.

Examinations will be held at the close of each term.

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BOARD OF REGENTS
OF THE
OREGON AGRICULTURAL COLLEGE
AND
EXPERIMENT STATION.

OFFICERS.

HON. J. T. APPERSON, *President*.....Oregon City.
HON. JOHN D. DALY, *Secretary*.....Corvallis.
HON. B. F. IRVINE, *Treasurer*.....Corvallis.

EX-OFFICIO MEMBERS.

HON. T. T. GEER, *Governor of the State*.....Salem.
HON. F. I. DUNBAR, *Secretary of State*.....Salem.
HON. J. H. ACKERMAN, *Supt. of Public Instruction*Salem.
HON. WILLIAM M. HILLEARY, *Master of State Grange*.....Turner.

APPOINTED BY THE GOVERNOR.

TERM EXPIRES.

HON. J. T. APPERSON.....Oregon City, 1901.
HON. W. P. KEADY.....Portland, 1901.
HON. J. K. WEATHERFORD.....Albany, 1901.
HON. BENTON KILLIN.....Portland, 1903.
HON. J. M. CHURCHLa Grande, 1903.
HON. JOHN D. OLWELL.....Central Point, 1903.
HON. WM. E. YATES.....Corvallis, 1907.
HON. JOHN D. DALY.....Corvallis, 1907.
HON. B. F. IRVINE.....Corvallis, 1907.

STANDING COMMITTEES
OF THE
BOARD OF REGENTS.

EXECUTIVE COMMITTEE—J. T. Apperson, *Chairman*, John D. Daly, *Secretary*, W. P. Keady, John D. Olwell, W. M. Hilleary.

FINANCE COMMITTEE—J. M. Church, *Chairman*, Benton Killin, W. M. Hilleary.

AGRICULTURE AND CHEMISTRY—Benton Killin, *Chairman*, W. M. Hilleary.

HORTICULTURE AND ENTOMOLOGY—Wm. E. Yates, *Chairman*, John D. Daly.

MECHANICS AND HOUSEHOLD SCIENCE—W. M. Hilleary, *Chairman*, J. K. Weatherford.

LIBRARY—J. H. Ackerman, *Chairman*, B. F. Irvine,

ADVERTISING AND PRINTING—W. P. Keady, *Chairman*, John D. Daly.

BUILDINGS AND GROUNDS—John D. Olwell, *Chairman*, J. K. Weatherford.

FARMERS' INSTITUTES—J. K. Weatherford, *Chairman*, Wm. E. Yates.

FACULTY AND INSTRUCTORS.

THOS. M. GATCH, A. M. PH. D., President and Director,
Political and Mental Science.

JAMES WITHYCOMBE, Vice-Director,
Professor of Agriculture.

F. BERCHTOLD, A. M., Dean of College,
Professor of History and Latin.

MARGARET C. SNELL, M. D.,
Professor of Household Science and Hygiene.

ELLEN J. CHAMBERLIN, A. M., Lady Dean,
Professor of German and Instructor in English.

GRANT A. COVELL, M. E.,
Professor of Mechanics and Mechanical Engineering.

*G. W. SHAW, A. M., PH. D.,
Professor of Chemistry.

J. B. HORNER, A. M., LITT. D.,
Professor of English and Literature.

GORDON V. SKELTON, C. E.,
Professor of Mathematics and Civil Engineering.

A. B. CORDLEY, M. S.,
Professor of Zoölogy.

E. R. LAKE, M. S.,
Professor of Botany and Horticulture.

†A. L. KNISELY, M. S.,
Professor of Chemistry.

HELEN V. CRAWFORD, B. S.,
Professor of Elocution.

* Resigned, to take effect June 30, 1900.
After July 1, 1900.

GEORGE COOTE,

Professor of Floriculture and Gardening.

JOHN F. FULTON, B. S.,

Assistant Professor of Chemistry and Assaying.

IDA B. CALLAHAN, B. S.,

Assistant Professor of English.

F. L. KENT, B. AGR.,

Assistant Professor of Agriculture and Dairying.

E. C. HAYWARD, E. E.,

Assistant Professor of Mechanical and Electrical Engineering.

CHAS. L. JOHNSON, B. S.,

Instructor in Mathematics.

E. F. PERNOT,

Bacteriologist.

C. M. MCKELLIPS, PH. C.,

Assistant Chemist and Instructor in Pharmacy.

F. M. McELFRESH, B. S.,

Instructor in Zoölogy.

M. CLYDE PHILLIPS, B. M. E.,

Instructor in Mechanical Drawing and Ironwork.

DOROTHEA NASH, B. H. E.,

Instructor in Freehand Drawing.

D. W. PRICHARD,

Instructor in Woodwork.

MAJOR F. E. EDWARDS, Commandant,

Military Science and Tactics.

E. J. LEA, B. S.,

Instructor in Physical Culture.

MARY AVERY,

Instructor in Sewing.

OTHER OFFICERS.

T. H. CRAWFORD, A. M.,
Clerk and Purchasing Agent.

ARTHUR J. STIMPSON, B. M. E.,
Librarian.

GEO. B. KEADY,
Printer.

HELEN L. HOLGATE,
Stenographer.

MARION F. WOODS, B. S. A.,
Assistant Florist and Gardener.

WALTER G. KEADY,
Assistant Printer.

O. B. CONNER,
Foreman of the Farm.

J. A. SPANGLER,
Engineer.

ELLSWORTH ERWIN,
Janitor.

FACULTY COMMITTEES.

LECTURES AND LITERARY ENTERTAINMENTS.—Professors Shaw, Horner, Crawford, Mr. Pernot.

LIBRARY.—Assistant Professor Callahan, Professors Withycombe, Horner.

MUSIC.—Instructor Crawford, Professor Chamberlin, Assistant Professor Fulton, Instructors Nash, Prichard.

SOCIAL ENTERTAINMENTS.—Professors Cordley, Snell, Chamberlin, Assistant Professor Kent, Major Edwards.

EMPLOYMENT.—Professors Coote, Horner, Instructor Johnson.

LITERARY SOCIETIES.—Professors Lake, Crawford, Assistant McKellips.

ATHLETICS.—Professor Cordley, Assistant Professors Fulton, Hayward, Major Edwards.

ENTRANCE EXAMINATIONS.—Professors Skelton, Horner, Crawford, Assistant Professor Callahan.

ACCREDITED SCHOOLS.—Professors Covell, Horner, Skelton.

ADVISORY COMMITTEE.—Professors Lake, Berchtold, Assistant Professor Callahan.

THESES.—The President, the Dean and the head of the department in which the thesis is prepared.

THE STATION STAFF.

THOS. M. GATCH, M. A., PH. D.,
Director.

JAMES WITHYCOMBE,
Vice-Director and Agriculturist.

*G. W. SHAW, M. A., PH. D.,
Chemist.

A. B. CORDLEY, M. S.,
Entomologist.

E. R. LAKE, M. S.,
Botanist and Horticulturist.

GEORGE COOTE,
Florist and Gardener.

†A. L. KNISELY, M. S.,
Chemist.

JOHN F. FULTON, B. S.,
Assistant Chemist.

C. M. McKELLIPS, PH. C.,
Assistant Chemist.

F. L. KENT, B. S. AGR.,
Assistant Agriculturist and Dairy Instructor.

E. F. PERNOT,
Bacteriologist.

T. H. CRAWFORD,
Clerk and Purchasing Agent.

HELEN L. HOLGATE,
Stenographer.

* Resigned, to take effect June 30, 1900.

† After July 1, 1900.

Oregon Agricultural College.

HISTORY.

By an act approved by President Lincoln, July 2, 1862, a grant of land was made by the United States to each state in the Union in the amount of thirty thousand acres, or its equivalent, for each Senator and Representative to which the state was entitled by the apportionment of the census of 1860.

The proceeds under this act were to constitute a perpetual fund the principal of which was to remain forever undiminished; but interest arising from said fund in each state, which should avail itself of the benefits of the act, was to be applied inviolably to the support and maintenance of a "College where the leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Ninety thousand acres of land were apportioned to Oregon, and by an Act approved October 9, 1862, the Legislative Assembly of Oregon accepted the provisions of the congressional law.

In 1868 the legislature appointed three commissioners to locate the land, which was done and the report submitted in 1870.

There were in 1868 no state colleges in Oregon, and the same legislature that provided for the location of the land gave the use of the funds that should arise from the sale of the land to the Corvallis College, in Benton county, an institution of learning under the control of the M. E. Church, South.

None of the land of the land grant having as yet been sold, the legislature made an annual appropriation to support the school until the fund to be derived from the grant should become sufficiently large for that purpose. The amount appropriated, while not large, accomplished the purpose: It kept "the feeble spark from expiring."

In 1885 the church voluntarily relinquished its claim on the funds of the Agricultural College, and the state resumed control vesting the general control of the college in a board of regents, granting full power to that end.

In the summer of 1887 the corner-stone of a brick structure was laid by the Governor of Oregon amid imposing ceremonies. This structure, the new Agricultural College, erected by citizens of Benton county on the Agricultural College farm, was the nucleus around which other buildings soon began to cluster as necessity and growing interests demanded.

For a year or two there was ample room; but like a healthy plant placed in good soil, the institution expanded, until the original thirty-five acres have increased to nearly two hundred, and the first structure now proudly surveys its eight descendants.

THE MORRILL ACT.

On August 30, 1890, "An Act" was passed by Congress "to apply a portion of the proceeds of the public lands to

the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July 2, 1862.

This act provided that in 1890, \$15,000 should be paid to these land grant colleges and that the amount so appropriated should be increased by the sum of \$1,000 annually for ten years, and that thereafter the amount annually appropriated should continue to be \$25,000.

It is provided in this act that this money shall be "applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic sciences with special reference to their application in the industries of life, and to the facilities for such instruction." But it is provided that "no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings."

THE HATCH ACT.

In addition to the above, this college receives from the United States, under the "Hatch Bill" of 1887, the sum of \$15,000 a year for experimenting in agriculture. With this sum it supports an agricultural experiment station in connection with the college. As this "Hatch Fund" is used entirely for experiment work, it adds nothing to the income available for educational purposes. But the experiment station is valuable to students in agriculture in giving them practical illustration in many agricultural and horticultural processes.

LOCATION.

The State Agricultural College is located at Corvallis, Oregon, near the head of navigation on the Willamette river. The city, as its name indicates, is in the heart of this beautiful valley. To the east, on the distant horizon, may be seen the Cascades, with their snow-capped peaks, while to the west, and near at hand, is the Coast range. Mary's Peak, the tallest in the range, for several months of the year is covered with snow, and, though twenty miles away, adds beauty to the scene.

Corvallis is located on high ground, is healthful, and has not been visited by any dangerous, epidemic diseases. It is accessible by rail from the east, west, north and south.

The postoffice address is Corvallis, Benton Co., Oregon. The Pacific Postal and Western Union Telegraph Companies, and Wells, Fargo & Co's Express have offices in Corvallis.

BUILDINGS AND GROUNDS.

CAMPUS AND FARM.

The college grounds comprise 198.91 acres. Of this a tract of 35 acres in the immediate vicinity of the administration buildings constitutes the campus. This is tastefully laid out and adorned with trees, shrubbery, flower gardens, walks, and drives, and it is intended to have all of the native trees and shrubbery of the state represented on these grounds. On the campus are the grounds for military drill, base ball, foot ball, lawn tennis, bicycle track and general athletics. The college farm consists of about one hundred and fifty-five acres, and is to the west of the administration building. The farm is provided with barns, silos, piggery,

tool house, implements and stock, sufficient for the purpose of practical instruction in agriculture. One hundred acres of the farm are devoted to a variety of farm crops, grass plats, orchards, berry and vegetable plats, illustrative of the studies and experiments in agriculture and horticulture.

ADMINISTRATION BUILDING.

The administration building stands on a pleasant elevation to the west of Corvallis, and is a large substantial brick structure. This building contains many class rooms, chemical, pharmaceutical and zoological laboratories, library, chapel, museum, and the offices of the President, Dean, and Clerk of the College.

CHEMISTRY BUILDING.

This very neat building is located to the south of, and quite near, the administration building, and contains the station chemical laboratory, students' laboratory, and the office of the station and college chemist. The equipment of the department of chemistry is one of the most complete on the coast.

GYMNASIUM AND ARMORY.

South of the chemical building may be seen the very substantial structure of the gymnasium and armory, a building 70x120 feet, built of wood and stone. The main hall is used for commencement purposes. The basement, 12 feet high in the clear, contains the bowling alleys, physical culture rooms for men and women, commandant's quarters, etc.

The gymnasium, which is 20 feet to the under side of the trusses, has an unobstructed floor area of 8000 square feet. It is encircled by a suspended gallery six feet wide. A stage, with dressing rooms for men and women, occupies the east end of the main hall.

During the winter months this spacious building serves as a drill hall for the cadets, and the classes in physical culture.

HORTICULTURAL BUILDING.

This building stands north of the administration building, and contains a class room and laboratory for the department of floriculture, and the office and laboratory of the bacteriologist of the station.

Adjoining this building are the spacious greenhouses which contain an extensive and typical collection of florist's plants.

POWER HOUSE.

To the west of the administration building is located the power house, a roomy, one story brick structure containing, in the north wing, one forty-five horse power engine with two electric generators of two hundred light capacity each, which furnish light for all the principal buildings, including the armory and the dormitories, as well as power for mechanical hall. The south wing, with cement floor, is all one large blacksmith shop containing twenty forges for the use of students taking the mechanical and agricultural courses.

MECHANICAL HALL.

One of the most substantial, as well as elegant, structures on the campus is mechanical hall, recently finished. With

its solid stone walls and galvanized iron roof it is a fine example of modern architecture.

On the first floor are found the machine shops, the printing office, the physical laboratory and various recitation rooms and the office of the professor of mechanical engineering; while the rooms in the upper story are occupied by the departments of botany and horticulture, mathematics and civil engineering, and the classes in wood-working, mechanical and freehand drawing.

DAIRY BUILDING.

The Dairy building is located west of Alpha hall, and contains a complete system of apparatus for giving practical instruction in its line of work. It also contains the office of the dairy instructor.

CAUTHORN HALL.

This is a large and comfortable building, four stories high, well provided with water, steam heat, and electric lights.

The dining room, kitchen, and club rooms of this building are commodious, pleasant, and well furnished. There is room sufficient to accommodate about one hundred students.

ALPHA HALL.

This is a cheerful and delightful home for the young women students. It is two stories high and contains rooms for thirty young ladies, besides pleasant reception and music rooms and a commodious dining hall. It is lighted by electricity and provided with excellent water.

THE HEATING PLANT.

This very important part of the college equipment was completed in October, 1899, and has proved to be far more efficient than the stoves, the hot air and hot water systems which had before been used in supplying the various buildings with heat. The plant has all the latest and best steam-heating appliances and has a capacity sufficient to keep the recitation rooms at a summer temperature on the coldest days. The building, with a base 33 feet square and a height of 15 feet, is made of brick and stone, and has a brick chimney 65 feet in height. The steam is furnished by a battery of two steel boilers, seventy-five horse power each, which is connected with the buildings by double lines of steam pipes running through under-ground brick conduits.

All of the rooms in the administration and chemical buildings, the mechanical hall, the horticultural building and the greenhouses are supplied with heat from this plant, and it is probable that Alpha hall and the Armory will be supplied from the same source as soon as the resources of the institution will admit.

STUDENT LIFE.

CAUTHORN HALL CLUB.

Cauthorn hall club is under the management of Professor and Mrs. Horner. During the coming year, this club will be conducted on the co-operative plan. A nominal fee will be charged for rent and electric lights. The expense of living at the club therefore will be but little more than the actual outlay for help, wood, groceries, vegetables, etc. The maximum cost is not to exceed \$2.50 per week.

To become a member of Cauthorn hall club it will be

necessary for the applicant to give satisfactory evidence of his ability to govern himself. To join the club prior to January 1, he will be required to pay in advance a fee of ten dollars; to join after January 1 and before April 1, eight dollars; to join later than April 1, five dollars. This fee will be set aside for wood, rent, lights and repairs to rooms, and the portion of the fee unexpended for this purpose will be returned to the student at the close of the year or at the expiration of his membership. It will also be necessary for him to pay upon entrance and on or before the first day of each succeeding month during his membership with the club ten dollars to be used in defraying other necessary expenses. At the close of each month the unexpended balance of this fund will be applied to the reduction of such fund to be paid for the succeeding month.

Each room of the hall is furnished with a table, chairs, a chest with drawers, a bedstead, springs, mattress, pillow and mirror. Hence the student is expected to furnish sheets, pillow cases, blankets, quilts, towels, broom, dustpan, washbowl and pitcher, comb, brushes, tumblers, carpet or matting, pictures and other things that will make his room comfortable and homelike. He should bring a dictionary and such other books as are used for study, for reference, and for profitable entertainment.

The hall is furnished with a reading room which is supplied by the club with some choice current literature.

For further information send for special circular.

ALPHA HALL.

Alpha or young ladies' hall will be continued the coming year under the management of Miss Snell, the immediate charge being delegated to a competent assistant.

A circular, stating price of board and containing detailed information regarding all necessary matter, will be issued early in July of this year and may be had on application to the college clerk.

The hall is healthfully located, lighted by electricity, and supplied with excellent water. A tennis court and facilities for other games render the hall grounds most attractive.

Applicants for rooms must present satisfactory certificates of good character.

There will be a charge of \$4.00 per month for room, light, heat and service, and board in the hall may be had for \$8.00.

SOCIAL LIFE OF THE STUDENTS.

The social life of students is not neglected. The college has six active literary societies which meet every week. Once a term each society gives a social attended by some member of the faculty. Literary contests are common events, the societies meeting in joint session, with prominent citizens as judges. The Y. M. C. A. and Y. W. C. A. hold their regular sessions at the college every Sunday afternoon. These gatherings aid materially in developing the social and spiritual life of the members. Each year a popular course of lectures free to all students is given, under the direction of the faculty, by distinguished speakers from various parts of the state. At the chapel period the students meet with the faculty in song, prayer and scriptural reading, usually followed with orations by the seniors or with musical or rhetorical exercises by other students. Vocal and instrumental music intersperse various features of the college work, so that a student in a career of four years may not leave the institution without the refining influences of this important art. Physical culture is encouraged in every

way at the gymnasium and on the training grounds. Bowling, fencing, Indian-club swinging, dumb-bell exercises, foot ball, basket ball, base ball, and lawn tennis occupy the spare moments of the students in a happy commingling of all classes. Hardly a month passes when there is not a friendly contest with some other institution of learning in some athletic sport. These social affairs, although under the direction of a committee of the faculty, are managed by the students who thereby acquire a training in social life destined to be of great value to them.

Corvallis is pre-eminently a college town noted for social clubs, literary societies, and active churches which vie with each other in friendly interest and hospitality toward our young people. More and more as the institution progresses patrons of the college move hither that they may be with their children and at the same time enjoy the refining influences and cultured society of a college community.

SOCIETIES.

The students maintain several literary societies, three for young ladies and three for young gentlemen. These societies are of a semi-fraternal nature, offering to their members social as well as literary advantages. The exercises consist principally of essays, declamations, debates and music. Public and joint meetings are held by permission of the faculty. Many other features of college life, social and literary, are under their supervision. Students are elected to membership by those already belonging to the societies.

The following is a list of the different societies now in existence:

For young ladies: Sorosis, Pierian, Feronian.

For young men: Amicitia, Jeffersonian, Philadelphian.

The membership of each of these societies is limited to forty. They are all in a flourishing condition.

The students also maintain active branches of both the college Y. M. C. A. and Y. W. C. A.

In March, 1896, the literary societies of the college began the publication of a monthly periodical, the "College Barometer." The enterprise met with marked success, and the paper, controlled entirely by students, now wields a strong influence in all college affairs. During the coming year every effort will be made to improve it and make it of interest not only to those directly connected with the school, but to all who are in touch with literary, scientific and industrial education. The editors will be pleased to receive news of alumni and other persons formerly connected with the college. Brief, pointed notes, accounts of scientific experiments and discoveries, and short, well-written and instructive literary articles are also solicited.

ATHLETIC ASSOCIATION.

The students of the college maintain an athletic association which is governed by the following rules and regulations:

1. The athletic association of the college shall have immediate charge of, and be responsible for, the proper conduct of all athletic games of the college, under the supervision of the athletic committee of the faculty.

2. A candidate for any position on an athletic team, bearing the colors and name of the Oregon Agricultural College, shall be of good moral character, shall not fall below a passing grade in more than one study, and shall have matriculated during the first month of the college year, or at least three months before applying for membership on such team.

3. A committee on athletics, composed of five members of the faculty shall have general supervision over all athletics of the college.

4. All action of athletic clubs must be referred to this committee for its approval.

5. All trainers employed by the clubs of the college must be of good moral character, and must be approved by the athletic committee.

6. No inter-collegiate, or other, contests shall be entered into without consent of the athletic committee.

7. In all athletics provision must be made by the athletic association to meet all expenses, whether for general or special athletics, so that the college name will not be involved in any way with bad debts.

8. No student who is excused from industrial work, or military drill, on account of physical disability, shall be allowed to engage in college athletics.

GOVERNMENT.

The college does not undertake to prescribe in detail either its requirements or prohibitions. Students are met on a plane of mutual regard and helpfulness. Our appeal is to a proper sense of the proprieties of life and the necessity of organization on such a basis.

Established by a government that recognizes no distinction of religious belief, the Oregon Agricultural College seeks neither to promote any creed nor to exclude any; but it will always do everything in its power to promote the religious spirit and life.

Whenever the college life of any student is such that his influence, directly or indirectly, is injurious to the work of the institution, he will be relieved from further attendance at this college.

All absences will be charged from the first recitation of the term.

COURSE OF LECTURES.

In addition to the regular lectures given in the various departments by members of the faculty, a course of lectures by representative men, is delivered at convenient intervals during the year. These lectures bring young people in contact with the leaders in the various departments of human endeavor; arouse investigation on current topics; stimulate students to emulate the achievements of specialists; give

breadth of scholarship to the student and aid in developing the character of the institution.

They rank among the most attractive features of college life and are free to all students.

CONDITIONS OF ADMISSION.

To enter the freshman year the applicant must be at least fifteen years of age, and must be able to pass a satisfactory examination in reading, spelling, geography, arithmetic (written and mental), United States history and English grammar.

Those applicants who have completed a high school course will be given proper credit for work accomplished, and all those who have finished a course in certain approved grammar schools, a list of which is given below, will be admitted to the freshman year on presentation of their diplomas.

SPECIAL STUDENTS.

Provision is made as follows to accommodate students who do not wish to enter the regular college courses:

Non-graduate, special students who may desire to attend regular classes in any department may do so on recommendation of the head of the department and the consent of the President.

Such special students must be at least eighteen years of age, and shall not be considered candidates for graduation.

Students will be admitted at any time to advanced classes on passing an examination upon the preceding subjects.

ADMISSION FROM OTHER COLLEGES.

Students from other colleges must show a certificate of good standing, or honorable dismissal. Such applicants

will receive credit for studies pursued in any college authorized to confer degrees, so far as the two courses are equivalent, upon presenting a certificate of standing from the proper officers.

ACCREDITED SCHOOLS.

Graduates from the following accredited schools will be admitted to the freshman year without examination:

Albany,	Hood River
Astoria,	Independence,
Ashland,	Jacksonville,
Athena,	Junction City,
Baker City,	Klamath Falls,
Bandon (Major Course),	La Grande,
Bishop Scott Academy,	La Creole Academy,
Corvallis,	Lafayette High School,
Cottage Grove,	Marshfield,
Coquille Collegiate Institute,	McMinnville,
Elgin,	Medford,
Enterprise Academy,	North Yamhill,
Eugene,	Oregon City,
Forest Grove,	Pendleton,
Garland Academy,	Portland,
Grant's Pass,	Park Place,
Harrisburg,	Salem,
Halsey,	Santiam Academy,
Hillsboro High School,	The Dalles,
Huntington,	Union,
Heppner,	Wasco.

The above list is subject to annual revision.

SCOPE OF THE INSTITUTION.

The scope of the institution, as now organized, cannot be better stated than in the comprehensive words of the act of Congress defining the duty of this and similar colleges:

"The leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislature of the state may prescribe, *in*

order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Based upon this broadened foundation, the special work of the Oregon Agricultural College is the training of youth in those branches of learning which lie at the foundation of modern industrial pursuits. In accordance with the purposes of its founders, and the terms of its original charter, it aims to give special and prominent attention to agriculture, both theoretical and experimental; but it also provides "a liberal and practical education," in the leading branches of mathematical, natural and physical sciences, in order to prepare youth "for the several pursuits and professions of life." It has increased its subjects and courses of study, and its teaching and illustrative equipment, to such an extent that now, "without excluding classical studies," its leading object is to teach the various sciences in such a manner as to show their applications in the more important industries, to combine with every branch of instruction such an amount of actual practice in the shop, the field, and the laboratory as will serve to illustrate and apply the theory, but without subordinating it. The course of study, as now arranged, conforms very closely to the recommendations of the *Association of American Agricultural Colleges and Experiment Stations*. The range of its work in this direction is shown, as far as the limits of space will allow, in the following descriptive statements and schedule. It is confidently believed that few institutions in the country furnish opportunities for obtaining advanced scientific education to an equal extent and thoroughness at so moderate a cost and with so many incidental advantages.

DEGREES AND COURSES OF STUDY.

UNDERGRADUATE WORK.

The courses offered at the college are arranged under four general heads—Agriculture, Mechanical and Electrical Engineering, Household Science, and Pharmacy—all of which require training in mathematics, history, English, elocution, drawing and such other branches as are requisite to a practical education.

Graduation requires four years of college work; and all the courses of study lead to the degree of Bachelor of Science. In order that the college may meet the needs of a greater number of people and the students intensify along special lines, much of the work is made elective, as may be seen by reference to the courses of study published elsewhere in this catalogue.

GRADUATE WORK.

That students may be encouraged to continue their college work after graduation, the board of regents has made provision for courses leading to advanced degrees.

ADVANCED DEGREES.

Advanced degrees will be given to graduates of this college, or similar, approved colleges, upon the following conditions:—

An applicant for a higher degree must present himself for examination in one major and at least one minor study. Major and minor courses leading to the degree of Master of

Science, to be selected from different departments, approved by the faculty, are provided for in the departments of Agriculture, Botany, Chemistry, Economics, Horticulture, Zoology, Mechanical and Electrical Engineering and Household Science. The minor, at the option of the student, may also be taken from the departments of Mathematics, History or Modern Languages. The candidate must prepare a thesis, based upon original research, which shall show scholarly acquirements of a high order. This thesis must be printed or typewritten and bound, and three copies of it left in the college archives. The candidate must spend at least two academic years, or their equivalents, as a resident student at this college in preparing for this degree.

SCHOOL OF MINES
OF THE
OREGON AGRICULTURAL COLLEGE.
CORVALLIS, OREGON.



Addendum to Standing Committees of the Board :
MINES AND MINING—W. P. Keady, J. K. Weatherford.

FACULTY.

THOMAS M. GATCH, President.

JOHN F. FULTON,
Geology and Mineralogy.

GRANT A. COVELL,
Mechanics and Mechanical Engineering.

GORDON V. SKELTON,
Mathematics and Mining Engineering.

A. L. KNISELY,
Chemistry.

M. CLYDE PHILLIPS,
Mechanical Drawing and Ironwork.

D. W. PRICHARD,
Woodwork.

FARLEY D. McLOUTH,
Freehand Drawing.

The foregoing are more intimately connected with the School of Mines. For full College Faculty see catalogue.

COURSE OF STUDY.

FIRST TERM.

SECOND TERM.

THIRD TERM.

FRESHMAN YEAR.

Algebra	5.	Algebra	5.	Algebra	5.
Grammar	5.	Composition	5.	Composition	5.
General History	5.	General History	5.	Modern History	5.
Freehand Drawing	3.	Elocution	2.	Freehand Drawing	5.
Elocution	2.	Freehand Drawing	3.	Physical Geography	5.
Woodwork	5.	Woodwork	5.	Military Drill	5.
Military Drill	4.	Military Drill	3.		

SOPHOMORE YEAR.

Geometry	5.	Geometry	5.	Trigonometry	5.
Rhetoric	5.	Chemistry	7.	Chemistry	7.
Mechanical Drawing	10.	Rhetoric	4.	Surveying	7.
Blacksmithing	5.	Mechanical Drawing	5.	Mechanical Drawing	3.
Military Drill	4.	Blacksmithing	5.	Tool Dressing	5.
		Military Drill	3.	Military Drill	5.

JUNIOR YEAR.

Mine Surveying	3.	Tunneling, leveling, etc.	5.	Calculus	5.
Mechanism	5.	Physics	7.	Physics	7.
Analytical Geometry	5.	Descriptive Geometry	3.	Steam Engines and Boilers	4.
Descriptive Geometry	5.	Calculus	5.	Civics	5.
Qualitative Analysis	5.	Machine Shop	5.	Geology	5.
Machine Shop	2½.	Military Drill	1½.	Military Drill	5.
Military Drill	1½.	Military Science	1½.		
Military Science	1½.				

SENIOR YEAR.

Mineralogy	7.	Metallurgy and Ore Dress- ing	7.	Mining Engineering	5.
Mechanics of Engineer- ing	5.	Assaying	6.	Mining Hydraulics and Ventilation	5.
Thermodynamics	3.	Psychology	5.	Assaying	7.
Physics	7.	Mechanics of Engineer- ing	5.	Mechanics of Engineer- ing	5.
Military Drill	1½.	Military Drill	1½.	Machine Design	5.
Military Science	1½.	Military Science	1½.		

Figures give the number of recitations during a week.

The four-year course leads to the degree of Bachelor of Science.

SPECIAL COURSE.

FIRST TERM.

SECOND TERM.

THIRD TERM.

FIRST YEAR.

Algebra	5.	Algebra	5.	Trigonometry	5.
Plane Geometry	5.	Plane Geometry, Black-		Surveying	7.
English	5.	smithing	5.	Physics	7.
Mechanical Drawing ..	10.	Physics	7.	Tool Dressing	5.
Military Drill	4.	English	5.	Military Drill	5.
		Mechanical Drawing ..	5.		
		Military Drill	3.		

SECOND YEAR.

Mineralogy	7.	Metallurgy and Ore Dress-		Mining Engineering ..	5.
Mine Surveying	3.	ing	7.	Assaying	7.
Rhetoric	5.	Assaying	6.	Chemistry, Metals	7.
Physical Laboratory ..	7.	Chemistry, Non-Metals ..	7.	Geology	5.
Economics	5.	Rhetoric	4.	Military Drill	5.
Military Drill	4.	Psychology	5.		
		Military Drill	1½.		

Certificates are granted to those completing the two-year course.

ADMISSION.

Requirements for Admission to the School of Mines are the same as those for the other departments of the College. See pages 24 and 122 of the catalogue.

FACILITIES.

Several rooms are devoted to assaying. Our shops, fitted with the latest and best machinery, and our several laboratories afford excellent facilities for the study of metallurgy. The four-year course prepares the student for the conduct of mining operations in all their various phases.

SCIENTIFIC EXCURSIONS.

The Professor of Geology and the Professor of Mining Engineering are now (August, 1900) visiting the various mining districts of Oregon. On these excursions they expect to be accompanied by the advanced students of this department. With suitable camping outfit these expeditions are made with little expense, while the lessons taught are of great practical value. Their object is to investigate every thing of interest in Geology and Mining, and to secure specimens for the College Museum and duplicates for the private cabinets of members of the party. Notes are taken, and, during term-time, full reports are read before the students of the School of Mines.

ASSAYING AND ANALYZING.

The funds at our disposal must be devoted solely to instruction, experimentation, and to the solution of questions of general interest. We cannot engage to do work for individuals and corporations. If, however, samples are sent which we can use in class demonstration, either in assaying or in chemistry, results will be returned free of charge.

These samples can be used only when we are engaged in that particular line of work, and no time-limit can be recognized.



COURSE IN AGRICULTURE.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
* { Freehand Drawing 3	Drawing I.
* { Elocution 2	Elocution I.
* Woodwork 5	Shopwork I.
Military Drill 4.....	Military I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Composition 5	English II.
* General History 5.....	History II.
Elocution 2.....	Elocution II.
Freehand Drawing 3.....	Drawing II.
Woodwork 5.....	Shopwork II.
Military Drill 3	Military I.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5	English III.
Plant Morphology 5.....	Botany I.
Breeds of Stock 5	Agriculture I.
* Freehand Drawing 5.....	Drawing III.
Military Drill 5.....	Military I.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5.....	Mathematics IV.
Rhetoric 5.....	English IV.
* Plant Histology 7.....	Botany II.
Dairying 2½.....	Agriculture II.
Drainage 2½.....	Agriculture III.
Blacksmithing 3.....	Shopwork IV.
Military Drill 4.....	Military I.

SECOND TERM.

Geometry 5.....	Mathematics V.
Chemistry 7.....	Chemistry I.
Rhetoric 4.....	English V.
* Soils and Manures 5.....	Agriculture IV.
Blacksmithing 5.....	Shopwork V.
Military Drill 3.....	Military I.

THIRD TERM.

* Trigonometry 5.....	Mathematics VI.
Chemistry 7.....	Chemistry II.
English Literature 5.....	English VI.
Zoology 7.....	Zoology I.
Military Drill 5.....	Military I.

JUNIOR YEAR.

FIRST TERM.

Plant Physiology 7	Botany III.
* Entomology 7	Zoology II.
Qualitative Analysis 7	Chemistry III and XI.
Dairying 5	Agriculture V.
Military Drill $1\frac{1}{2}$	Military I.
Military Science $1\frac{1}{2}$	Military II.

SECOND TERM.

* Literature 5	English VII.
Physics 7	Physics I.
Vertebrate Anatomy 7	Zoology III.
Agricultural Chemistry 5	Chemistry IV.
Military Drill $1\frac{1}{2}$	Military I.
Military Science $1\frac{1}{2}$	Military II.

THIRD TERM.

* Surveying 7	Mathematics X.
Physics 7	Physics II.
Stock Feeding and Breeding 4	Agriculture VI.
Physiology 5	Zoology IV.
Steam Engine 2	Mechanics IV.
Military 5	Military I.

SENIOR YEAR.

FIRST TERM.

Economics 5.....	Political Science I.
Veterinary Science 5, or,	Agriculture VII.
Horticulture 5.....	Horticulture I.
Military Drill 1½.....	Military I.
Military Science 1½.....	Military II.

†*Electives.*

German 5, or,	German X.
Latin 5.....	Latin X.
Chemistry 7.....	Chemistry V.
Mineralogy 7.....	Chemistry VI.
Botany 7.....	Botany IV.
Zoology 7.....	Zoology VI.
Bacteriology 7.....	Bacteriology I.

SECOND TERM.

Psychology 5.....	Mental Science I.
Veterinary Science 5, or,	Agriculture VIII.
Horticulture 5.....	Horticulture II.
Military Drill 1½.....	Military I.
Military Science 1½.....	Military II.

†*Electives.*

German 5, or,	German XI.
Latin 5.....	Latin XI.
Botany 7.....	Botany V.
Chemistry 7.....	Chemistry VII.
Zoology 7.....	Zoology VII.
Bacteriology 7.....	Bacteriology II.

Assaying 7.....	Chemistry VIII.
Elocution 2.....	Elocution V.

THIRD TERM.

Veterinary Science 5, or,.....	Agriculture IX.
Horticulture 5.....	Horticulture III.
Civics 5.....	History V.

†*Electives.*

Military Drill 5.....	Military I.
American Literature 5.....	English VIII.
German 5, or,.....	German XII.
Latin 5.....	Latin XII.
Astronomy 5.....	Mathematics XI.
Agricultural Engineering 5.....	Mathematics XII.
Botany 7.....	Botany VI or VII.
Zoology 7.....	Zoology VIII.
Geology 5.....	Geology I.
Chemistry 7.....	Chemistry IX.
Bacteriology 7.....	Bacteriology III.
Assaying 7.....	Chemistry X.

* Latin or German may be elected instead.

† In addition to the required studies seniors must select from the electives a sufficient number of hours to form a full course, viz: 25 hours.

COURSE IN HOUSEHOLD SCIENCE.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
* { Freehand Drawing 3.....	Drawing I.
{ Elocution 2.....	Elocution I.
General Hygiene 1.....	Household Science I.
Sewing 4.....	Household Science II.
Physical Culture 3.....	Physical Culture I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Composition 5.....	English II.
* General History 5.....	History II.
Elocution 2.....	Elocution II.
Freehand Drawing 3.....	Drawing II.
Etiquette 1.....	Household Science V.
Sewing 4.....	Household Science II.
Physical Culture 3.....	Physical Culture I.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5.....	English III.
Plant Morphology 5.....	Botany I.
* Freehand Drawing 5.....	Drawing III.
Sewing 5.....	Household Science II.
Physical Culture 3.....	Physical Culture I.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5.....	Mathematics IV.
* Plant Histology 7.....	Botany II.
Rhetoric 5.....	English IV.
Dressmaking 5.....	Household Science III.
Elocution 2.....	Elocution III.
Physical Culture 3.....	Physical Culture II.

SECOND TERM.

Geometry 5.....	Mathematics V.
History of Eastern Peoples 5.....	History III.
Chemistry 7.....	Chemistry I.
Rhetoric 4.....	English V.
Dressmaking 5.....	Household Science III.
Physical Culture 2.....	Physical Culture II.

THIRD TERM.

English Literature 5.....	English VI.
Zoology 7.....	Zoology II.
Chemistry 7.....	Chemistry II and III.
Modern History 5.....	History IV.
* Dressmaking 5.....	Household Science III.

JUNIOR YEAR.

FIRST TERM.

Plant Physiology 7.....	Botany III.
Entomology 7.....	Zoology II.
Chemistry 7.....	Chemistry III and XI.
German 5, or,.....	German VII.
Latin 5.....	Latin VII.
Cookery 3.....	Household Science IV.

SECOND TERM.

Literature 5.....	English VII.
Floriculture 5.....	Floriculture I.
German 5, or,.....	German VIII.
Latin 5.....	Latin VIII.
Vertebrate Anatomy 7.....	Zoology III.
Cookery 3.....	Household Science IV.
Physical Culture 3.....	Physical Culture III.

THIRD TERM.

Dairying 5, or,.....	Agriculture V.
American Literature 5.....	English VIII.
German 5, or,.....	German IX.
Latin 5.....	Latin IX.
Physiology 5.....	Zoology IV.
Civics 5.....	History V.
Cookery 3.....	Household Science IV.

SENIOR YEAR.

FIRST TERM.

Economics 5.....	Political Science I.
Aesthetics 5	Household Science VI.
German 5, or,.....	German X.
Latin 5.....	Latin X.

†*Electives.*

Botany 7.....	Botany IV.
Zoology 7.....	Zoology V.
Chemistry of Foods 7.....	Chemistry XII.
Bacteriology 7.....	Bacteriology I.
Elocution 2.....	Elocution IV.
Drawing 5.....	Drawing IV.

SECOND TERM.

Psychology 5.....	Mental Science I.
German 5 or.....	German XI.
Latin 5.....	Latin XI.
Aesthetics 5.....	Household Science VII.

†*Electives.*

Physics 7.....	Physics I.
Chemistry of Foods 7.....	Chemistry XII.
Zoology 7.....	Zoology VI.
Botany 7.....	Botany V.
Elocution 2.....	Elocution V.
Drawing 5.....	Drawing V.
Bacteriology 7.....	Bacteriology II.

THIRD TERM.

Domestic Lectures 5.....	Household Science VIII.
German 5, or,.....	German XII.
Latin 5.....	Latin XII.

† *Electives.*

Physics 7.....	Physics II.
Geology 5.....	Geology I.
Chemistry of Foods 7.....	Chemistry XII.
Zoology 7.....	Zoology VII.
Botany 7.....	Botany VI.
Elocution 2.....	Elocution VI.
Drawing 5.....	Drawing VI.
Astronomy 5.....	Mathematics XI.
Bacteriology 7.....	Bacteriology III.
Landscape Gardening 5.....	Horticulture III.

* Latin or German may be elected instead.

† In addition to the regular studies seniors must select from the electives enough hours to form a full course, viz: 25 hours.

COURSE IN MECHANICAL ENGINEERING

FRESHMAN YEAR.

FIRST TERM.

Algebra 5	Mathematics I.
Grammar 5	English I.
General History 5	History I.
* { Freehand Drawing 3	Drawing I.
* { Elocution 2	Elocution I.
Woodwork 5	Shopwork I.
Military Drill 4	Military I.

SECOND TERM.

Algebra 5	Mathematics II.
Composition 5	English II.
*General History 5	History II.
Elocution 2	Elocution II.
Freehand Drawing 3	Drawing II.
Woodwork 5	Shopwork II.
Military Drill 3	Military I.

THIRD TERM.

Algebra 5	Mathematics III.
Composition 5	English III.
Modern History 5	History IV.
*Freehand Drawing 5	Drawing III.
Woodwork 5	Shopwork III.
Military Drill 5	Military I.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5	Mathematics IV.
Rhetoric 5	English IV.
Mechanical Drawing 10	Mechanical Engineering I.
*Blacksmithing 5	Shopwork IV.
Military Drill 4	Military I.

SECOND TERM.

Geometry 5	Mathematics V.
Chemistry 7	Chemistry I.
Rhetoric 4	English V.
*Mechanical Drawing 5	Mechanical Engineering II.
Blacksmithing 5	Shopwork V.
Military Drill 3	Military I.

THIRD TERM.

Trigonometry 5	Mathematics VI.
Chemistry 7	Chemistry II and III.
English Literature 5	English VI.
Mechanical Drawing 3	Mechanical Engineering III.
Blacksmithing 5	Shopwork VI.
*Military Drill 5 ...	Military I.

½ JUNIOR YEAR—MECHANICAL.

FIRST TERM.

*Literature 5	English VII.
Mechanism 5	Mechanical Engineering IV.
Analytical Geometry 5	Mathematics VII.
Descriptive Geometry 5	Mechanical Engineering V.
Machine Shop 5	Shopwork VII.
Military Drill 1½	Military I.
Military Science 1½	Military II.

SECOND TERM.

Physiology 5	Zoology V.
Physics 7	Physics I.
*Descriptive Geometry 3	Mechanical Engineering VI.
Calculus 5	Mathematics VIII.
Machine Shop 5	Shopwork VIII.
Military Drill 1½	Military I.
Military Science 1½	Military II.

THIRD TERM.

Calculus 5	Mathematics IX.
Physics 7	Physics II.
Steam Engines and Boilers 4	Mechanical Engineering VII.
Civics 5	History V.
*Machine Shop 4	Shopwork IX.
Military Drill 5	Military I.

SENIOR YEAR—MECHANICAL.

FIRST TERM.

Economics 5.....	Political Science I.
Mechanics of Engineering 5,	Mechanical Engineering VIII.
Thermodynamics 3.....	Mechanical Engineering IX.
Physics 7.....	Physics III.
Military Drill 1½.....	Military I.
Military Science 1½.....	Military II.

†*Electives.*

German 5, or,	German X.
Latin 5.....	Latin X.
Woodwork 5.....	Shopwork X.
Ironwork 5.....	Shopwork XI.
Mechanical Drawing 5.....	Mechanical Engineering X.
Mineralogy 7.....	Chemistry VI.

SECOND TERM.

Psychology 5.....	Mental Science I.
Machine Design 3.....	Mechanical Engineering XI.
Mechanics of Engineering 5,	Mechanical Engineering XII.
Military Drill 1½.....	Military I.
Military Science 1½.....	Military II.

†*Electives.*

German 5, or,	German XI.
Latin 5.....	Latin XI.
Woodwork 5.....	Shopwork XII.
Ironwork 5.....	Shopwork XIII.
Mechanical Drawing 5.....	Mechanical Engineering XIII.
Assaying 7.....	Chemistry VIII.
Elocution 2.....	Elocution V.

THIRD TERM.

Mechanics of Engineering 5. . Mechanical Engineering XIV.
 Machine Design 5. Mechanical Engineering XV.

†*Electives.*

German 5, or, German XII.
 Latin 5. Latin XII.
 Astronomy 5. Mathematics XI.
 American Literature 5. English VIII.
 Surveying 7. Mathematics X.
 Woodwork 5. Shopwork XIV.
 Ironwork 5. Shopwork XV.
 Mechanical Drawing 5. Mechanical Engineering XVI.
 Assaying 7. Chemistry X.
 Military Drill 5. Military I.

‡Students wishing to specialize in electrical engineering may elect to do so at the beginning of the junior year.

†In addition to the regular studies seniors must select from the electives enough hours to form a full course, viz : 25 hours.

JUNIOR YEAR—ELECTRICAL.

FIRST TERM.

Descriptive Geometry 5.....	Mechanical Engineering V.
Mechanism 5.....	Mechanical Engineering IV.
Analytical Geometry 5.....	Mathematics VII.
Physics 5.....	Electrical Engineering I.
* Machine Shop 5.....	Shopwork VII.
Military Drill $1\frac{1}{2}$	Military I.
Military Science $\frac{1}{2}$	Military II.

SECOND TERM.

Electricity and Magnetism 7....	Electrical Engineering II.
* Literature 5	English VII.
Descriptive Geometry 3.....	Mechanical Engineering VI.
Calculus 5.....	Mathematics VIII.
Machine Shop 5	Shopwork VIII.
Military Drill $1\frac{1}{2}$	Military I.
Military Science $1\frac{1}{2}$	Military II.

THIRD TERM.

Calculus 5	Mathematics IX.
Electricity and Magnetism 7..	Electrical Engineering III.
Steam Engines and Boilers 4.	Mechanical Engineering VII.
* Civics 5.....	History V.
Machine Shop 4.....	Shopwork IX.
Military Drill 5.....	Military I.

SENIOR YEAR—ELECTRICAL.

FIRST TERM.

Economics 5	Political Science I.
Mechanics of Engineering 5	Mechanical Engineering VIII.
Alternating Currents and Dynamo Design 7	} Electrical Engineering IV.
Physics 7	
Military Drill 1½	Military I.
Military Science 1½	Military II.

SECOND TERM.

Psychology 5	Mental Science I.
Machine Design 3	Mechanical Engineering XI.
Mechanics of Engineering 5	Mechanical Engineering XII.
Alternating Currents and Dynamo Design 7	} Electrical Engineering V.
Military Drill 1½	
Military Science 1½	Military II.

† *Electives.*

German 5, or,	German XI.
Latin 5	Latin XI.
Woodwork 5	Shopwork XII.
Ironwork 5	Shopwork XIII.
Mechanical Drawing 5	Mechanical Engineering XIII.
Assaying 7	Chemistry VIII.
Elocution 2	Elocution V.

THIRD TERM.

Mechanics of Engineering 5	Mechanical Engineering XIV.
Machine Design 5	Mechanical Engineering XV.
Alternating Currents and Dynamo Design 7	Electrical Engineering VI.

† *Electives.*

German 5; or,	German XII.
Latin 5	Latin XII.
Astronomy 5	Mathematics XI.
American Literature, 5	English VIII.
Surveying 7	Mathematics X.
Woodwork 5	Shopwork XIV.
Ironwork 5	Shopwork XV.
Mechanical Drawing 5	Mechanical Engineering XVI.
Assaying 7	Chemistry X.

† In addition to the regular studies seniors must select from the electives enough hours to form a full course, viz: 25 hours.

COURSE IN PHARMACY.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
Latin 5.....	Latin I.
Freehand Drawing 3.....	Drawing I.
Elocution 2.....	Elocution I.
† Military Drill 4.....	Military I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Composition 5.....	English II.
Latin 5.....	Latin II.
General History 5.....	History II.
Freehand Drawing 3.....	Drawing II.
Elocution 2.....	Elocution II.
Military Drill 3.....	Military I.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5.....	English III.
Latin 5.....	Latin III.
Plant Morphology 5.....	Botany I.
Zoology 7.....	Zoology I.
Military Drill 5.....	Military I.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5.....	Mathematics IV.
Rhetoric 5.....	English IV.
Latin 5.....	Latin IV.
Plant Histology 7.....	Botany II.
Military Drill 4.....	Military I.

SECOND TERM.

Geometry 5.....	Mathematics V.
Rhetoric 4.....	English V.
Latin 5.....	Latin V.
Vertebrate Anatomy 7.....	Zoology III.
Chemistry 7.....	Chemistry I.
Military Drill 3.....	Military I.

THIRD TERM.

Latin 5.....	Latin VI.
Civics 5.....	History V.
Plant Classification 7.....	Botany VII.
Chemistry 7.....	Chemistry II and III.
Modern History 5.....	History IV.
Military Drill 5.....	Military I.

JUNIOR YEAR.

FIRST TERM.

Literature 5	English VII.
Medical Chemistry and Qualitative Analysis 7 }	Chemistry X and XIII.
Pharmacognosy 2	Pharmacy I.
Pharmacy 6	Pharmacy II.
Military Drill 1½	Military I.
Military Science 1½	Military II.

SECOND TERM.

Medical Chemistry and Qualitative Analysis 8 }	Chemistry X and XIII.
Pharmacognosy 2	Pharmacy III.
Pharmacy 6	Pharmacy IV.
Physics 7	Physics I.
Military Drill 1½	Military I.
Military Science 1½	Military II.

THIRD TERM.

Medical Chemistry 5	Chemistry X.
Physiology 5	Zoology IV.
Physics 7	Physics II.
Therapeutics and Doses 2	Pharmacy V.
Nomenclature 1	Pharmacy VI.
Pharmacy 4	Pharmacy VII.
Military Drill 5	Military I.

SENIOR YEAR.

FIRST TERM.

Materia Medica and Therapeutics 3	Pharmacy VIII.
Operative Pharmacy 4	Pharmacy IX.
Prescription Practice 7	Pharmacy X.
Quantitative Analysis 10	Chemistry V.
Military Drill 1½	Military I.
Military Science 1½	Military II.

SECOND TERM.

Materia Medica and Therapeutics 3	Pharmacy VIII.
Operative Pharmacy 4	Pharmacy IX.
Prescription Practice 6	Pharmacy X.
Pharmaceutical Analysis 10	Chemistry XV.
Military Drill 1½	Military I.
Military Science 1½	Military II.

THIRD TERM.

Pharmacognosy and Synonyms 3	Pharmacy XI.
Prescription Practice 6	Pharmacy X.
Pharmacy 2	Pharmacy XII.
Toxicology 1	Pharmacy XIII.
Pharmaceutical Analysis 10	Chemistry XV.
*Military Drill 5	Military I.

NOTE.—† Young ladies take physical culture instead.

* Elective.

SUB-FRESHMAN YEAR.

The course of instruction offered under this head is intended for young people who live at considerable distance from an academy or high school, and were unable to attend such, but have finished the eighth grade in a good public school. No tuition is charged. The work is distributed in the three terms as follows:

FIRST TERM.	SECOND TERM.	THIRD TERM.
English Grammar.	English Grammar.	Grammar and Composition.
Composition.	Composition.	Algebra.
Arithmetic.	Elementary Algebra.	Physical Geography.
History of the United States.	History of the United States.	Book-keeping.

According to a regulation of the board of regents no students may be admitted to this class who come from towns or cities of more than fifteen hundred inhabitants, or from such as are supporting good high schools. To enter this class, students must be fifteen years of age.

DEPARTMENTS OF INSTRUCTION.

MENTAL AND POLITICAL SCIENCE.

AGRICULTURE.

HISTORY AND LATIN.

HOUSEHOLD SCIENCE.

MODERN LANGUAGES.

MECHANICAL AND ELECTRICAL ENGINEERING.

CHEMISTRY.

ENGLISH LANGUAGE AND LITERATURE.

MATHEMATICS AND CIVIL ENGINEERING.

ZOOLOGY.

BOTANY AND HORTICULTURE.

ELOCUTION AND PHYSICAL CULTURE.

FLORICULTURE AND GARDENING.

BACTERIOLOGY.

MUSIC.

DRAWING.

MILITARY.

MENTAL AND POLITICAL SCIENCE.

THOMAS M. GATCH, A. M., PH. D., PRESIDENT.

Course I.—*Economics*.—Senior year; first term. During the first part of the term our aim is to familiarize the student with the principles of the science. The last part of the term is devoted principally to debates, informal discussions and theme work. Our library is well supplied with reference books in this department. Students are encouraged in original investigation. The labor question, socialism, taxation, money and tariff receive attention. Five hours a week. Ely's Outlines.

Course II.—*Civics*.—Junior year; third term. Practical information is presented as to the rights and duties which attach to American citizenship. Constant care is taken to give reasons as well as justification for each power exercised by our government, and to inculcate in every way the moral obligations of good citizenship. Five hours a week. Willoughby, "Rights and Duties of American Citizenship."

Course III.—*Psychology*.—Senior year; second term. This study presupposes a considerable acquaintance with the structure and functions of the brain and nervous system. Students acquire this knowledge in the laboratory under the direction of the professor of zoology. The intellectual faculties, the sensibilities and the will are carefully studied; the various schools of philosophy are criticised and compared and themes are often required from members of the class. Five hours a week. Halleck.

AGRICULTURE.

JAMES WITHYCOMBE, Vice-Director and Professor of Agriculture.
F. L. KENT, B. Agr., Assistant Professor of Agriculture.
O. B. CONNOR, Foreman.

The object sought throughout the entire agricultural course is to familiarize the student with the art and science of agriculture. This embraces the study of zoology, botany, chemistry and bacteriology, the sciences related to agriculture; and the supplementary studies of mathematics, economics, physics, history, language and other cultural branches, all of which broaden the course of study and tend to elevate the educated farmer to the intellectual level of other professions.

The college laboratories are strictly modern in their appointments and are supplied with up-to-date equipments, which afford the student unusual opportunities for making a thorough study of all the sciences related to agriculture.

While the theory of agriculture, as based upon the sciences, is being taught, the industrial side is not overlooked. Instruction is given in wood and iron working in the carpenter and blacksmith shops under competent supervision. The student is also taught how to handle and care for steam machinery, and is made thoroughly familiar with the mechanism of the farm traction engine.

The instruction given in the class-room is directly supplemented by actual demonstrations of the best agricultural practice on the college farm, thus giving to the student an opportunity to observe the methods employed, and enabling

him to note from time to time the results of the practical applications of science to agricultural methods.

The college and station farm consists of 199 acres, 140 of which are devoted to farm crops, pasture, and experimental purposes. The farm is equipped with dairy building, horse-barn, cattle-barn, silos, piggery, tool-house, engine-house, etc., and with typical specimens of several breeds of stock.

Students laboring on the farm and in gardens, receive pay at the rate of 10 cents per hour. Only comparatively few persons can be so employed, as the amount of work to be done is limited. Those only who by their work prove to be valuable laborers will be employed.

DAIRYING.

One of the purposes of the Oregon Agricultural College is to advance the business industries of the state. It is believed that dairying is one of the most important lines of work that can now be undertaken in Oregon. There is now a large body of land in the state which is especially adapted to this industry. For this reason dairying has been introduced as a branch of study in the agricultural course. A separate building has been provided for such instruction and it is fitted up with all the necessary machinery for carrying on the work in the most approved way. An expert dairyman is in charge of this work.

All students in the agricultural department will be required to study dairying not only as a science but as an art. Those taking the household science course will have the same opportunities as the agricultural students.

This is a line of practical work which, it is believed, will prove of great advantage both to the student and to the

state. The practical instruction includes both butter and cheese making.

A short course has been provided, as described elsewhere in the catalogue, whereby practical instruction in dairying may be obtained by those who can not avail themselves of a college course.

The instruction in applied agriculture extends through the freshman, sophomore, junior and senior years, as shown in the following synopsis of courses :

Course I.—*Breeds of Stock*.—Freshman year; third term. The study of the history of the different classes of farm stock, their origin and characteristics. By means of charts, in the class-room the student is made familiar with the different points of animal form preparatory to the use of the score-card system for judging farm animals. This is followed by a practical application of this system in judging dairy cows, beef cattle, mutton sheep and swine. In this manner the student obtains useful information relative to animal form and function, and thus becomes acquainted with the points of excellence in the typical pure bred, as well as the points of merit in the animal designed for the butcher's block. Five hours a week.

Course II.—*Theoretical Dairying*.—Sophomore year; first term. Theoretical dairying will be taught in the class-room for one-half term. Instruction will be given by text-book and lectures. Five hours a week for one-half term.

Course III.—*Drainage*.—Sophomore year; first term. The study of the general principles of drainage; laying out and construction of farm drains; the effects of drainage upon the chemical and physical conditions of the soil. Five hours per week for one-half term.

Course IV.—*Soils and Manures*.—Sophomore year; second

term. The origin and formation of soils; soil tillage; man-
agement and application of manures; green manuring; or-
ganic and mineral manures; soil exhaustion; rotation of
crops, and methods of improving worn-out soils. Five
hours a week.

Course V.—*Dairying*.—Junior year; first term. (a) Prac-
tical work in the dairy for agricultural students. The prin-
ciples taught in the sophomore year will be put into
practice in the actual work of the manufacture of butter and
cheese. The Babcock test, rennet tests, and curd tests, as
well as the subjects of creamery accounting will receive due
attention. Five hours a week.

(b) Practical work in the dairy for household science stu-
dents. This work is practically the same as above. Wing's
"Milk and its Products" will also be used as a text during
a portion of the term. Five hours a week throughout the
third term.

Course VI.—*Stock Feeding and Breeding*.—Junior year;
third term. Stock feeding covers the subject of rations
for milk and meat production; how best balanced for econom-
ical feeding. Stock breeding covers the subjects of atavism,
heredity, in-and-in-breeding, variation, pre-potency and care
of breeding animals. Opportunity is given for judging and
scoring live stock, and for studying the essential points of
breeds adapted to different purposes. Four hours a week.

Course VII.—*Veterinary Science*.—Senior year; first term.
This subject will be taught by lectures covering the
anatomy of the horse, and taking up the diseases most com-
mon to domestic animals, giving causes, symptoms, and
treatment for the same. Special stress is placed upon
proper treatment to prevent disease in domestic animals.
Five lectures a week.

Course VIII.—*Veterinary Science*.—Senior year; second term. Continuation of course VII. Five lectures a week.

Course IX.—*Veterinary Science*.—Senior year; third term. A continuation of courses VII and VIII. Five lectures a week.

Instruction is given largely by lectures, suitable books being selected for reference. Miles' book on drainage. Curtis' "Horses, Cattle, Sheep, and Swine." Warfield's "Cattle Breeding," Stewart's "Stock Feeding." Armsby's Manual of Cattle Feeding. Wing's "Milk and its Products." Shaw's "Study of Breeds." "Soil" by King. "Fertility of Soil" by I. P. Roberts.

HISTORY AND LATIN.

F. BERCHTOLD, A. M., Dean of College.

HISTORY.

The study of history is begun in the freshman year with Myers' General History as a guide.

The class reports for recitations in divisions of about thirty each, which enables the instructor to devote more attention to each individual student.

Although using Myers' History as a quasi guide, it has been our practice to give each student independent work, as much as possible, and then to subject such research to unreserved criticism and freest discussion in the class-room. This encourages originality, the mind gains power, courage, becomes keen and able to sift the essential from the nonessential. From his constant contact with concrete materials, matter outside of his textbook, he acquires the rarest of qualities—historic sympathy.

Course I.—*Greek and Roman History*.—Freshman year; first term. Includes the study of general Hellenic development; the Athenian leadership; the Hellenistic or Alexandrian conquests and kingdoms. The political organizations of republican Rome in the prae- and post-Punic periods. Study on the pagan empire; Teutonic migrations. The Christian empire under Roman control. Five hours a week.

Course II.—*Mediæval History*.—Freshman year; second term. A study of social and political institutions from the fifth to the fifteenth centuries. Five hours a week.

Course III.—*History of Eastern Peoples*.—Sophomore year; second term. A survey of the history of China, Japan and India. Religion, arts and general culture of Egypt, Chaldaea, Assyria, Babylonia, Persia. Five hours a week.

Course IV.—*Modern History*.—Sophomore year; third term. This is a study of the era of the reformation and renaissance. (1490-1648). A general study of the age of Louis XIV., Frederick the Great, Anne and the Georges, Maria Teresa, and Peter the Great. The great French revolution and the wars of Napoleon. The states-general of 1789 to congress of Vienna, 1815. German and Italian freedom and unity. Discussions touching the material progress of the age; famous works of art; foundations, inventions, discoveries, enterprises, improvements and investigations.

The college is well supplied with wall maps, and charts, and there is a good working library of historical reference books.

In addition to the individual work of the student, as outlined above, lectures are given on the more important periods, viz., the great reformation, thirty years' war, English reformation, the French revolution, etc.

LATIN.

As may be seen in the outline of the courses of study, Latin is offered as an elective to the students in agriculture, and mechanical and electrical engineering. It is required of students in the pharmacy course. The young ladies of the household science course may elect either Latin or a modern language.

Course I.—*Elementary Latin*.—Freshman year; first term. First three declensions and first and second conjugations. Numerous exercises in translating Latin into English as

well as English into Latin. Latin reader: Collar's *Via Latina*.

Course II.—*Elementary Latin*.—Freshman year; second term. Declensions and regular conjugations finished. Review. Exercises in translating. *Via Latina*.

Course III.—*Elementary Latin*.—Freshman year; third term. Irregular verbs. Subjunctive mood. Ablative absolute. Sequence of tenses, etc. Exercises. *Via Latina*.

Courses IV to XII.—*Advanced Latin*.—Sophomore and succeeding years. The first year's instruction is largely grammatical, prominence being given to Latin writing as the best method of acquiring a mastery of the language, which is of such a character as to be eminently suggestive and helpful to the student of English. This preliminary work done, the student is then trained to appreciate its literature. Attention is called, during the reading of various authors, to those numerous problems in the history, thought and institutions of the Romans which illustrate similar phenomena noticeable among ourselves. The contribution of the Roman world to the language, literature, and institutions of our time is so great that a thorough acquaintance with that life is of the highest educational value.

HOUSEHOLD SCIENCE.

MARGARET C. SNELL, M. D., Professor.
MARY AVERY, Assistant in Sewing.

Self interest, and public interest, make it apparent to every intelligent person how greatly in need are subjects pertaining to the home of being "touched to fine issues;" hence their introduction as studies into college curricula.

We have been reviled as "the most common schooled, and least cultivated, among all civilized nations," and this largely through our deplorable indifference to, and ignorance of, the common facts and necessities of life.

The home as we find it to-day has scant warrant that anything born of its teaching is worth while to impart, yet the problem grows of how to get better results, how to lessen the labor of the farmer's wife, the washer-woman, the cook, the boarding-house keeper, the city missionary, the school teacher, the woman of fashion.

The solution requires something more than the knitting of the brow over theories; there must be actual testing of these theories by practice in the college laboratory, if they are to have value and permanence. The precious acquisition of the scholar who *knows*, must be further supplemented by that of the artist who *does*.

The various subjects pertaining to home life are taught under the following heads:

Course I.—*General Hygiene*.—Freshman year; first term. Good health is acknowledged as one of the prime factors of success in life; lectures and talks on this important subject

are not neglected. The amenities of home, and readings on kindred topics, give mental occupation to the sewing hour. One hour a week.

Course II.—*Sewing*.—Freshman year. During the first term there are sewing lectures and practice work, one hour a day, on sewing samples. Here are acquired and strengthened those invisible impulses: industry, dexterity, patience, exactness. Four hours a week.

Second term, sewing continued. Four hours a week.

During the third term sewing is combined with the making of simple garments. Readings, conversation. Five hours a week.

Course III.—*Dressmaking*.—Sophomore year. Cleverness with scissors, tape line, and needle finds in dress-making, millinery, home furnishing, a large field for the application of art principles to the living, moving canvas of actual life.

Instruction in dressmaking is an important branch of domestic science. Lectures will be given on the following subjects: The methods of manufacturing thread, cloths and other dressmaking material; hygienic principles of dress-making; study and sketching of drapery; history of costume, etc.

During the first term the work includes draughting and making simple skirts, cutting, fitting and making lined waists from pattern; a study of the texture of goods. Five hours a week.

Throughout the second and third terms instruction is given in draughting and making lined waists, matching stripes and plaids, study of woolen textiles. Five hours a week.

Course IV.—*Cookery*.—Junior year. The first term's work includes instruction in canning of fruits, one-half term; three

lectures ; one hour a day practice work in the kitchen laboratory ; technological cookery ; preparatory work in chemistry of foods.

The second and third terms' instruction includes practice work in cookery. Three hours a week throughout the year.

Course V.—*Etiquette*.—Freshman year ; second term. Lectures and talks on social forms and usages ; the art of entertaining ; readings on the art of conversation. Mahaffy. One hour a week.

Course VI.—Senior year ; first term. Lectures and recitations on the subject of aesthetics.

The first term is given to the general subject of aesthetics in its relations to the subjective and objective world ; the kinds and laws of beauty ; class readings from various authors on aesthetics ; the application of aesthetic principles to discourse as we find it illustrated in the great master pieces of literature. Five hours a week.

Course VII.—*Aesthetics*.—Senior year ; second term. Application of aesthetic principles to the fine arts, with a study of the best authors on these varied subjects. The two arts receiving especial attention during the coming year will be architecture and music. Five hours a week.

Course VIII.—*Domestic Lectures*.—Senior year ; third term. The term's work will include lectures on the following subjects : Special hygiene, including parentage, care of children, heredity, etc. ; sanitation of the home ; home furnishing ; emergency lectures ; fireside practice, etc. Five hours a week. Gleason's Special Hygiene.

MODERN LANGUAGES.

ELLEN J. CHAMBERLIN, A. M., Lady Dean.

Opportunity to study German is offered throughout the different courses except the course in pharmacy. We teach in a large measure by the conversational method. We aim to bring the student so far that he can read with ease and facility, and understand so much of the language as will be most helpful to him in practical life. A knowledge of German is a business possession of undoubted value for any young man, or young woman.

Courses I to VI.—*Elementary German*.—Collar's Eysenbach—German grammar; translation of easy prose and poetry as contained in Hewett's German reader. Composition.

Courses VII to XII.—*Advanced German*.—Nathan der Weise, Hauff's Das Kalte Herz, Fouque's Undine, Heyse's Anfang und Ende, Schiller's Wilhelm Tell; Maria Stuart; Das Lied von der Glocke. Eysenbach's grammar continued and reviewed. Composition; syntax.

MECHANICAL AND ELECTRICAL ENGINEERING.

GRANT A. COVELL, M. E., Professor.

E. C. HAYWARD, E. E., Assistant.

M. CLYDE PHILLIPS, B. M. E., Instructor in Ironwork and Drawing.

D. W. PRICHARD, Instructor in Woodwork.

Students in this department are allowed to choose either the course in mechanical engineering or the course in electrical engineering. Each course leads to the degree of Bachelor of Science, and the two courses are identical until the beginning of the junior year.

The course in mechanical engineering is intended especially for young men who expect to choose an industrial vocation and for those who are already, or expect to be, connected with some of the manufacturing establishments of the country.

The course in electrical engineering is designed to meet the needs of those who desire to turn their attention towards electrical science, the designing, the installation and the management of electric light and power plants, etc.

The shops are well equipped with tools and machinery from the best makers in the country; the idea being not only to have the shops well supplied with the necessary tools but also to make each shop a model as regards quality of equipment and systematic arrangement.

The uses of the various tools in the shop are taught by a series of exercise pieces which the student is required to make. After completing the exercises, the regular work consists in building and repairing machinery in the machine shop, mending farm implements, and making tools in the blacksmith shop, and other useful articles in the wood shop.

So far as possible, all work in the shops is executed from drawings and blue prints, which must be followed accurately.

In the drafting room the student begins with linear drawing and follows a progressive course until he is able to make complete working drawings of whole machines, and finally he is encouraged to produce designs of his own and to make complete drawings and blue prints of them.

The scientific principles involved in machines and mechanical movements are taught in the class-room, as well as the application of mathematics to problems in mechanical engineering. The student is required to solve original problems and to depend upon his own judgment and ingenuity as far as possible.

EQUIPMENT.

The machine shop is equipped with one 24" x 24" iron planer, one universal milling machine, one universal tool grinder, one radial drill, one 20" drill press, one 20" engine lathe, one 16" engine lathe, three 14" engine lathes, one 15" shaper, one emery grinder, two 10" speed lathes, twelve bench vises, and numerous small tools, such as hammers, chisels, drills, reamers, taps, dies, etc.

The blacksmith shop contains twenty stationary forges operated by an electric motor fan. Each forge is provided with anvil, hammers and tongs. The shop also contains two vises, a swedge block and a full set of swedges, fullers, and heading tools.

The woodshop contains one 4" four-sided moulder, one 24" surface planer, one iron saw table with rip and cut-off saws, one band saw, one jig saw, one 20" pattern maker's lathe, one post boring machine, four 12" wood-turning lathes, and twenty hand benches, each equipped with a set of tools con-

sisting of saws, planes, chisels and other small tools. Power is supplied by a 10 horse power electric motor.

The power house contains a 54 inch tubular boiler, pump, injector, feed water heater and a 40 horse power high speed automatic engine, belted direct to two 12½ kilowatt generators. These generators operate the motors in the machine shop, wood shop and blacksmith shop, and also furnish lights for the college buildings.

The steam, electrical and heating plants of the college furnish opportunity for much valuable experimental work in engineering, such as tests of boilers, engines, dynamos, motors, fans, pumps and injectors. The department is supplied with indicators, gauges, planimeters and other instruments to facilitate this work.

A Riehle testing machine of 50,000 pounds capacity, operated by an independent motor, affords means of testing the strength of metals, woods, stones or brick.

The following is an outline of the work done in the mechanical department:

SHOPWORK.

Courses I, II and III.—*Woodwork*.—Freshman year. A course in woodwork which includes carpentry, joinery and wood-turning, also the care and use of tools. Five hours a week throughout the year.

Courses IV, V and VI.—*Blacksmithing*.—Sophomore year. In this course the student is taught how to make and manage a forge fire; to shape iron by bending, drawing, upsetting and welding, and finally to make and temper cutting tools for the shops. Five hours a week.

Course VII.—*Machine Shop*.—Junior year; first term. This course is devoted principally to chipping, filing, polishing and hand work. Five hours a week.

Courses VIII and IX.—*Machine Shop*.—Junior year; second and third terms. These include a series of exercise pieces in turning, shaping, milling and drilling which the student is required to make from drawings. Five and four hours a week respectively.

Courses X, XII and XIV.—*Woodwork*.—Senior year. These courses are elective and are intended for students who desire to specialize in this branch. Particular attention is given to the care and management of wood-working machines and to pattern-making. Five hours a week throughout the year.

Courses XI, XIII and XV.—*Ironwork*.—Senior year. These are elective courses and follow course IX. The work consists of constructing parts of machines, repair work, and making tools for the shops. Five hours a week throughout the year.

MECHANICAL ENGINEERING.

Courses I, II and III.—*Mechanical Drawing*.—Sophomore year. In these courses the student begins at once to make mechanical drawings of simple objects and finally makes sketches of machines from which working drawings are made. Ten hours, the first term; five hours the second term and three hours the third term.

Course IV.—*Mechanism*.—Junior year; first term. This course treats of the motion of machine parts, and is introductory to the course in machine design. Five hours a week.

Courses V and VI.—*Descriptive Geometry*.—Junior year; first and second terms. The work in these courses is largely drawing. It involves the solution of problems in projection and intersection of lines, surfaces and solids. Five and three hours a week respectively.

Course VII.—*Steam Engines and Boilers*.—Junior year; third term. A study of the construction, care and operation of steam engines and boilers; recitations and lectures. Four hours a week.

Course IX.—*Thermodynamics*.—Senior year; first term. Steam and other engines considered as heat engines. Two hours a week.

Courses VIII, XII and XIV.—*Mechanics of Engineering*.—Senior year. A course in applied mechanics. The first two terms are occupied with a discussion of statical and dynamical problems. During the last term the strength of materials is studied with special reference to beams, girders and trusses; also the mechanics of fluids relating to pressure, flow and carrying capacity of pipes and open ditches. Five hours a week throughout the year.

Courses XI and XV.—*Machine Design*.—Senior year; second and third terms. A course applying the principles brought out in the courses in mechanism and mechanics to the design and construction of machine parts. Numerous practical problems are solved, the data for many of them being taken from machines used in the college so that the student may compare his results with those used in practice. Considerable draughting is done in connection with this course. Three and five hours a week respectively.

PHYSICS.

Courses I and II.—*Elementary Physics*.—Junior year; second and third terms. These courses cover the usual topics of mechanics, heat, electricity and magnetism, sound and light. Instruction is given by means of lectures and recitations, alternating with laboratory practice. Seven hours a week.

Course III.—*Physics*.—Senior year; first term. A laboratory course, which is a continuation of the preceding courses, and deals more especially with experiments in heat, light, sound and electricity. Seven hours a week.

ELECTRICAL ENGINEERING.

Course I.—*Physics*.—Junior year; first term. A special course in elementary physics provided for students in electrical engineering, covering practically the same ground as courses I and II in Physics. Five hours a week.

Courses II and III.—*Electricity and Magnetism*.—Junior year; second and third terms. Dealing with the general theory of electricity and magnetism and their most common application in practice: such as the telephone, telegraph, electro-plating, electric lighting, etc. In the laboratory the student becomes familiar with the usual measurements employed by the electrical engineer. Special attention is given to the calculation of magnetic circuits, thus leading up to the course in dynamo design. Lectures, recitation and laboratory work. Seven hours a week.

Courses IV, V and VI.—(a) *Alternating currents*.—Senior year. Being a development of the elementary theory of alternating currents, using both the graphical and analytical methods of calculation. A continuation of courses II and III. Lectures and recitations. Two or three hours a week for the first two terms.

(b) *Dynamo Design*.—Theory and practice of the design of direct and alternating current dynamos and motors, including calculation and construction of field magnets, armatures, commutators, etc. Lectures and recitations, supplemented by the making of models in the laboratory. Three hours a week during the third term.

(c) *Laboratory*.—An advanced course, being a continuation of the laboratory work carried on in courses II and III, including, in addition to the more common measurements, the measurement of insulation resistance, location of faults in cables, and construction of apparatus. Four or five hours a week throughout the year. Taken together a, b and c require seven hours a week throughout the year.

CHEMISTRY AND PHARMACY.

*G. W. SHAW, A. M., PH. D., Professor.

†A. L. KNISELY, M. S., Professor.

JONH F. FULTON, B. S., Assistant Professor.

C. M. MCKELLIPS, PH. G., PH. C., Instructor.

E. J. LEA, B. S., Assistant.

The study of chemistry is begun in the second term of the sophomore year.

Course I.—*General Inorganic Chemistry*.—Non-metals.—Sophomore year; second term. A daily exercise throughout the second term is devoted to recitations, lectures and laboratory practice. In this course special attention is given to the fundamental principles of the science, which are suitably illustrated either by experiments performed by the student in the laboratory, or, when too intricate and expensive of time, by the instructor before the class in the lecture room. The elements are discussed individually as well as their more important compounds.

The *practicum* of this course consists of a series of laboratory exercises dealing with the elements studied and is designed to introduce the student to chemical manipulation. Seven hours a week.

Course II.—*General Inorganic Chemistry*.—Sophomore year; third term. The study of the metals is entered upon in the third term and is conducted similarly to the study of the non-metals. The more important metals are individually discussed under the following heads: history, occurrence

* Resigned, to take effect June 30, 1900.

† After July 1st, 1900.

in nature, properties, preparation, uses, tests, and compounds. Special attention is given to metals and their compounds which are of industrial importance.

The laboratory work of the third term consists of a study of the properties of the metals, being an introduction to qualitative analysis. Seven hours a week.

Course III.—*Qualitative Analysis*.—Junior year; first term. The student is required to apply and study the reactions involved in the ordinary methods of separation and identification of substances. The study includes the reactions, ordinarily used in qualitative analysis, but deals with only those substances usually met with in chemical work. The student repeatedly works through a scheme of separation in making qualitative analyses of unknown substances. Seven hours a week.

Course IV.—*Agricultural Chemistry*.—Junior year; second term. This course deals with the more intimate relation of the science to agriculture. Such topics as soil composition, elements essential to plant growth, soil exhaustion, fertilizers; chemistry of cattle foods, nutrition, dairy products and food adulteration are dealt with as fully as time permits. Prerequisites, courses I, II and III. Five hours a week.

Course V.—*Quantitative Analysis*.—Senior year; first term. The student is required to make the ordinary fundamental determinations of moisture, aluminum, calcium, magnesium, copper, lead, potash, sulfuric acid, phosphoric acid, chlorin, and carbonic acid by gravimetric processes; estimations by volumetric methods including alkalimetry, acidimetry, precipitation, and oxidation will be undertaken. The work is so planned as to familiarize the student with the standard gravimetric and volumetric methods. This is

a required course for all pharmacy students and is elective for students who have completed courses I, II and III. Seven hours a week.

Course VI.—*Determinative Mineralogy*.—Senior year; first term. An elective laboratory course open to seniors in both agricultural and mechanical courses. The student will make use of the blowpipe and reagents to determine and classify the more common metal-bearing rocks, and the ordinary gangues. Elective. Seven hours a week.

Course VII.—*Quantitative Analysis*.—Senior year; second term. A continuation of course V. Elective. Seven hours a week.

Course VIII.—*Assaying*.—Senior year; second term. A course in practical assaying of gold and silver ores. Must be preceded by courses I, II, III. Elective. Seven hours a week.

Course IX.—*Quantitative Analysis*.—Senior year; third term. A continuation of courses V and VII. Elective. Seven hours a week.

Course X.—*Assaying*. Senior year; third term. A continuation of course VIII. Elective. Seven hours a week.

Course XI.—*Chemistry of Common Life*.—Junior year; first term. This is a short course treating of organic compounds of common life. It alternates during the first term with course III. This work is required of all students in agricultural and household science courses.

Course XII.—*Chemistry of Foods*.—Senior year. An elective extending through the senior year in the household science course. It is an expansion of the work in course XI, but limited to a study of foods from a chemical and scientific standpoint. Seven hours a week.

Course XIII.—*Qualitative Analysis*.—Junior year; first

and second terms. This course is a continuation of course III, and is designed exclusively for pharmacy students. It gives practice in the analysis of unknown mixtures for both acids and bases with special reference to the needs of pharmacists. Seven and eight hours respectively.

Course XIV.—*Medical Chemistry*.—Junior year. This subject is open only to students of the pharmacy course. It alternates throughout the year with laboratory practice. It is a more advanced course in chemistry than I, II and III, and embraces inorganic and organic chemistry and toxicology. Seven hours the first term, eight the second and five the third.

Course XV.—*Pharmaceutical Analysis*.—Senior year; second and third terms. Under this head is taken up the separation, identification and determination of the active constituents of alkaloidal drugs; also the identification of the more important organic compounds. Ten hours a week.

GRADUATE ELECTIVES.

Elective work in chemistry is offered as a major or a minor subject for two years to candidates for the degree of Master of Science.

Advanced Analysis.—This course is intended for those who may desire to specialize in chemical work. It provides a greater variety of analytical work than can be given in course V. It offers such work as the following: analysis of limestone (complete) coal, iron ores, milk, butter, cheese, water, urine, sugar (both volumetric and polariscopic) as well as various minerals. A student desiring to investigate along any particular line, as mineral, sanitary, agricultural, may do so. This course is open as a major subject to students who have completed courses I, II, III and V. Others

who may elect chemistry as a major subject will be assigned work in accordance with their previous attainments in the subject. With the above course in analysis a parallel course of reading must be taken, upon which the student will be required to pass a satisfactory examination at the end of the year. The work of the last year will be left largely to the student's choice, subject to the approval of the head of the department, and will serve as the basis for a graduation thesis.

GEOLOGY.

Course I.—*Geology*.—Senior year; third term. The course opens with work designed to acquaint the student with the common rocks and minerals as to their physical characters and appearance. The geological and mineralogical cabinets offer abundant opportunity for the study of specimens. The remainder of the course consists in a study of the aqueous, atmospheric, igneous; and organic agents in the earth's history; the structure and arrangement of rocks and the order of succession of strata. Elective in the agricultural and household science courses.

PHARMACY.

Courses I and III.—*Pharmacognosy*.—Junior year; first and second terms. In these courses are considered both the gross structure and characteristics of the crude drugs and chemicals. The student is taught the appearance, taste, color, odor, fracture and habitat of the various crude drugs, and also receives careful drill on their Latin and English names. The student has access to the specimens for study, and special effort is made to train the senses to the recognition of each of the drugs considered.

The pharmacognosy of the senior year consists in a

thorough review of the work of the junior year and practice in the recognition of powders, liquids, chemicals, and pharmaceutical preparations. Two hours a week.

Courses II, IV and VII.—*Pharmacy*.—Junior year. The student begins with the first principles of pharmacy and gradually advances to the more difficult topics. It is expected that he will become thoroughly acquainted with the correct methods of compounding both simple and complex prescriptions and making the ordinary galenical preparations. Much attention is given throughout the course to the practical side of dispensing, and the student receives considerable individual attention from the instructor and a large amount of practical experience in the dispensing laboratory which is under the immediate charge of an experienced pharmacist.

The several processes involved in the manufacture of pharmaceutical preparations are subjected to systematic study. Various official and unofficial preparations are then taken up and considered separately.

The laboratory work consists of practice in the application of the processes considered in the class room. Each student makes independently a sufficient number of preparations to insure a thorough understanding of the processes and manipulation involved. Six hours a week first and second terms, four during the third.

Course V.—*Therapeutics and Doses*.—Junior year; third term. The therapeutical uses of medicines serve as a basis for classifying them in a manner which will facilitate study. The definitions of medical terms are given special attention in the junior year. In this connection the student also learns the minimum and maximum doses of all

remedial agents in active use in the modern practice of medicine. Two hours a week.

Course VI.—*Nomenclature*.—Junior year; third term. A recitation course on the Latin titles of the Pharmacopœia, National Formulary, etc. One hour a week.

Course VIII.—*Materia Medica and Therapeutics*.—Senior year; first and second terms. All substances which find use in medicine are here studied one by one as to source, Latin and English names, formula (in the case of chemicals), compounds and preparations, properties, method of preservation, industrial and domestic use, impurities and adulterations, antidote (in case of poisons) and dose.

In the consideration of crude organic drugs, attention is especially directed to the constituents responsible for the medicinal activity of the drug, e. g., alkaloids, glucosides, volatile oils, etc. Three hours a week.

Course IX.—*Operative Pharmacy*.—Senior year; first and second terms. This course is a continuation of that in pharmacy in the junior year. It includes the preparations of the Pharmacopœia not considered in the junior year. Attention is given to the more difficult galenical preparations and the newer classes of remedies, elegant preparations, toilet articles, etc.

A large amount of work is required in the manufacture of difficult galenical preparations; also cachets, soft capsules, compressed tablets, triturates, and toilet articles. Four hours a week.

Course X.—*Prescription Practice*.—Senior year. The recitation work consists of reading, interpreting, criticising prescriptions and calculating doses. Special attention is given to incompatibilities and to the solubility of chemicals. Un-sightly, dangerous and explosive mixtures are also con-

sidered under this head. In this laboratory course and that of operative pharmacy the student gains experience for the prescription counter, learning the difficulties there met with and how best to overcome them. He also gains in manipulative skill in making extemporaneous preparations.

Each student is required to personally perform the operations under the direct supervision of the instructor. The student works not from book prescriptions, but from prescriptions written in the ordinary practice of physicians and found on file in the drug stores. Seven hours a week first term; six hours a week second and third terms.

Course XI.—*Pharmacognosy and Synonyms*.—Senior year; third term. The pharmacognosy of the senior year consists in a thorough review of the work of the junior year and practice in the recognition of powders, liquids, chemicals, and pharmaceutical preparations.

In addition to the knowledge of the scientific classifications of the medicines already considered up to this time, the student is further instructed regarding many "common names," or synonyms, in general use in the ordinary practice of pharmacy. Three hours a week.

Course XII.—*Pharmacy*.—Senior year; third term. Consideration is given to the composition of the more important galenical preparations of the United States Pharmacopœia. The percentage strength of the active ingredients, in each case, is learned. A general review of the theoretical work of the last two years is taken up at this point. Two hours a week.

Course XIII.—*Toxicology*.—Senior year; third term. The important active poisons—both mineral and vegetable—are studied. Their physiological action, characteristic

symptoms that follow their use, treatment and antidote are noted and commented upon. One hour a week.

From time to time special lectures are given on hygiene, pharmaceutical jurisprudence, etc.

STATE EXAMINATION AND REGISTRATION.

At its meeting held on December 14, 1898, the Oregon State Board of Pharmacy passed the following resolutions endorsing the course here offered:

WHEREAS, The Oregon State Agricultural College has established a course in pharmacy and chemistry that meets with the hearty approval of this Board, inasmuch as it offers a large proportion of practical work; therefore, be it

Resolved, That the Oregon State Board of Pharmacy acting in accordance with Sections 5 and 6 of the Oregon Pharmacy Law as amended, grant to students of the Oregon Agricultural College, who complete the full course and hold a diploma from said institution, after they shall have been subjected to such examination, at Corvallis, Oregon, as this Board may approve, on the completion of the senior year, a certificate to act as a registered pharmacist in this state.

Provided, That any student who may have taken the last two years of the course only and who does not hold the regular diploma from the said institution, on passing the examination aforesaid shall only be granted the certificate of a registered assistant.

The training in the pharmaceutical course is largely conducted in the laboratory for it is only by this means that the student can form an intimate personal acquaintance with the material and the best methods of manipulation. Thus it is that he receives systematic practice in dispensing, in the examination of drugs as to identity, purity, and strength, and in the manufacture of various preparations from crude drugs. The requirements of the U. S. Pharmacopœia are always kept in mind, and the student is always held strictly responsible for the purity of his preparations and the accuracy of his work. The course aims to teach students facts and principles of immediate use in the drug store, adapting the work to the needs of the practical pharmacist and manufacturing chemist. It is, however, further recognized that a thorough foundation must be laid for this work, and in view of this, two years of preparatory

work are required in the college, or its equivalent in some other school. Students who have had equivalent work elsewhere can complete the course in pharmacy in two years.

EXPENSES.

Neither tuition nor incidental fees are charged at this institution, but to cover the cost of material used and wasted in the laboratories a small laboratory fee and a deposit for breakage will be charged in the chemical and pharmaceutical laboratories as is the custom in all institutions. These fees are payable each term strictly in advance.

Chemical laboratory: Sophomore and junior years:

Material.....	\$1.50
Deposit for breakage.....	1.50

Senior Year:

Material.....	\$2.50
Deposit for breakage.....	1.00

Pharmaceutical Laboratory:

Material.....	\$2.50
Deposit for breakage.....	1.00

Text-books in chemistry: Elements of Chemistry, Storer and Lindsay; Laboratory Manual, Shaw; Qualitative Analysis, Irish; Quantitative Analysis, Evans; Agricultural Chemistry, Johnson, and Station Bulletins.

For reference: Roscoe and Schorlemer, Fresenius, the Official Methods, and Johnson's How Crops Grow and How Crops Feed.

Text-books in pharmacy: United States Pharmacopœia; Handbook of Pharmacy, Coblentz; Materia Medica, Culbreth; Dose Book, Hoak; Medical Chemistry, Barclay; Quantitative Analysis, Sturmer and Vanderkleed.

Numerous reference books and trade journals are furnished by the college.

ENGLISH LANGUAGE AND LITERATURE.

J. B. HORNER, A. M., LIT. D., Professor.
IDA B. CALLAHAN, B. S., Assistant Professor.

Courses I and II.—*English Grammar*.—Freshman year; first and second terms. Review in parsing and analysis of sentences, five weeks. Oral and written exercises in sentence-making with special reference to the concord, government, and order of words, twenty weeks. All recitations in grammar to be accompanied with exercises in spelling. Five hours a week. Maxwell's Advanced English Grammar.

Course III.—*English Composition*.—Freshman year; third term. Sentence making with reference to clearness, force and elegance, six weeks. Capitalization, punctuation and letter-writing, four weeks. Five hours a week.

Throughout the freshman year the class work will be interspersed with short compositions to be corrected under the direction of the instructor. Also each term, the student will prepare a synopsis of a book written by an approved American author.

Freshmen found deficient in preparatory studies may at the discretion of their instructors be assigned to the sub-freshman class in order to make up such deficiency. Students before promotion from this course must be able to pass an examination in spelling and grammar equivalent to that required for a first-grade teacher's certificate.

Courses IV and V.—*Rhetoric*.—Sophomore year; first and second terms. The work of the two terms includes a study

of style, description, narration, exposition, argumentation and oratory. Four and five hours a week respectively.

The student before promotion from course five must be able to write good essays, orations, lectures and newspaper articles.

Course VI.—*English Literature*.—Sophomore year; third term. Caedmon to Shakespeare with special study of Chaucer, Spenser, Jonson, Bacon, and Shakespeare. Supplementary reading from the college library. Required at least one paper from each student a week. Five hours a week.

Course VII.—*English Literature*.—Junior year; first and second terms. The study of English literary masterpieces continued. This course is open to students in pharmacy and mechanical and electrical engineering the first term, and to students in agriculture and household science the second term. Five hours a week.

Course VIII.—*American Literature*.—Junior year; third term. A study of American authors with supplementary reading from the college library. At least two papers each week are required on the books read. This work is also elective during the third term, senior year in the agricultural and the mechanical and electrical engineering course.

MATHEMATICS AND ENGINEERING.

GORDON V. SKELTON, C. E., Professor.
CHARLES L. JOHNSON, B. S., Instructor.

The course in Mathematics includes such of its branches as the distinctive aims of this institution require, and conforms itself, in general, to that in use in the most successful agricultural colleges.

That the study may to the fullest extent strengthen and discipline the mind for connected, logical thought, thoroughness and accuracy are insisted upon at all times. In the class-room all principles and demonstrations must be presented in an orderly and logical manner. The constant aim is to cultivate the powers of insight, judgment, and originality.

To meet existing conditions, it is necessary to so arrange the freshman mathematics, for the present, as to make it possible for students who come without preparation in algebra, but who are otherwise qualified, to enter the freshman class. To this end courses Ia, IIa and IIIa are offered. It is earnestly advised that students prepare themselves for the regular courses. In the main, the same work is accomplished in these as in the regular courses during the freshman year, but the student will have to work harder and will have less time for reviews and practice drills upon the principles.

Course I—*Algebra*.—Freshman year; first term. From simple indeterminate equations to ratio and proportion.

This course is open to students who have completed the sub-freshman work and to new students who can satisfy the department that they are prepared for the work. A review of about ten days will be devoted to the topics that precede simple indeterminate equations. Students unable to successfully pass this review will be required to drop back to course Ia. The subjects taught are those found in Wentworth's Higher Algebra which is used in all the freshman courses as a text. Five hours a week.

Course II—*Algebra*.—Freshman year ; second term. From ratio and proportion to theory of numbers. This course is open to all students who have successfully passed course I. Five hours a week.

Course III—*Algebra*.—Freshman year ; third term. From the theory of numbers on. This course is open to students who have had courses I or II or their equivalent. Five hours a week.

Courses Ia, IIa, IIIa.—The work in algebra will be divided into three parts which will be given respectively in the first, second and third terms of the freshman year under the conditions and to the students specified above. A satisfactory grade in any one course is necessary before pursuing the next higher. Students taking these courses must expect to devote a great amount of time to the work.

Course IV—*Plane Geometry*.—Sophomore year ; first term. This course includes all that is found in the first four books of plane geometry in any standard text, as Phillips and Fisher's. Special emphasis is laid upon definitions and principles. Original demonstrations are given and much time is devoted to original theorems and problems and at all times proofs and demonstrations are freely criticised and discussed in the class-room. Five hours a week.

Course V—*Plane, Solid and Spherical Geometry*.—Sophomore year; third term. This course includes book V of plane geometry and all of solid and spherical geometry. Students must have had course IV before taking this. Phillips and Fisher's *Plane and Solid Geometry*. Five hours a week.

Course VI—*Trigonometry*.—Sophomore year; third term. Students must have had all the preceding courses before taking this. Only enough time is given to spherical trigonometry to enable the student to solve the spherical triangle. Much time is devoted to practical triangulation and measurements. The department is supplied with all the necessary instruments which the students use under the direction of the instructor. The college has two most carefully measured base-lines, one 640 feet and the other 1000 feet long, which are used in the triangulations. Five hours a week.

Course VII—*Plane Analytical Geometry*.—Junior year; first term. This work is required of all students taking the mechanical and electrical engineering courses. The work embraces the subjects treated in Nichols' *Analytics*, which is used as a text. Five hours a week.

Course VIII—*Differential Calculus*.—Junior year; second term. This course is required of the same students as is course VII. Among the topics considered are differentiation and applications, evaluation of indeterminate forms, expansion of functions, Taylor's and Maclaurin's theorems, maxima and minima, points of inflection, curvature, change of independent variable, functions of two or more variables, asymptotes, curve tracing, etc. Five hours a week.

Course IX—*Integral Calculus*.—Junior year; third term. Among the topics considered are direct integration, definite integrals and applications, integration of rational fractions, integration by rationalization, integration by parts, integra-

tion of trigonometric forms, etc.; applications to finding the lengths and areas of curves, surfaces and volumes of solids of revolution, etc.; double and triple integration and applications. In this course as in course VIII, great stress is laid upon practical applications, and a large number of practical problems are solved. Five hours a week.

Course X.—*Surveying*.—Junior year: third term. This course is open to students who have completed course VI. The greater part of the time is spent by the student in the field with the various instruments. He is required to make surveys from descriptions given him as well as to write descriptions from surveys made by himself. In all cases notes must be carefully kept and worked up in the office.

The engineering department is equipped with the necessary instruments, including a railroad compass, transit with solar attachment, plane-table, Y level, hand-level, rods, chains, tapes, etc.

Course XI.—*Astronomy*.—Senior year; third term. That this most elevating and refining subject may be open to a greater number of students, it will be confined to descriptive astronomy and may be taken by students who have completed courses I to V, inclusive. Much time will be devoted to uranography. Five hours a week.

Course XII.—*Agricultural Engineering*.—Senior year; third term. This course is open to students who have completed course X. Under this head will be given instruction in road location and construction, including consideration of various road materials; designing of highway bridges; inspection of existing structures; designing, locating and constructing agricultural drainage systems; laying out farm buildings, etc. Instruction given in the class-room will be applied wherever possible. Five hours a week.

ZOOLOGY.

A. B. CORDLEY, M. S., Professor.
F. M. MCELFFRESH, B. S., Assistant.

The work in this department is designed to give the student that knowledge of biological laws which is to-day regarded as an essential part of a liberal education. It aims to create a growing interest in the study of our native birds, insects and other animals and their interrelations with one another, with native and cultivated plants and with rural life; to give a knowledge of the foundation facts of morphology and physiology on which depend many of the principles of scientific stock breeding and feeding, of veterinary science and of human physiology and hygiene; and above all from an educational standpoint, it aims to train the student's perceptive faculties, to teach him to see, to do and to reason from observed facts.

The laboratories of the department occupy two rooms on the third floor of the administration building. They are well supplied with necessary apparatus including compound and dissecting microscopes, camera lucidas, eyepiece and stage micrometers, an automatic microtome, dissecting sets, dry and steam sterilizers, incubators, reagent sets and numerous smaller articles, all of which are for the use of students.

For the purpose of illustration there are in addition to the general museum and the entomological collection, a set of the celebrated Leuchart zoological charts, enlarged dissectable models of the human ear, eye, heart, brain and larynx and a large series of microscopic mounts.

The general museum also contains a small but typical collection of mounted mammal skins; a collection of mounted skins of native birds; a collection of mounted bird skins from Alaska; a collection of more than one hundred species of eggs of native birds; a small collection of fishes and reptiles; a considerable number of marine invertebrates, including a small but beautiful collection of Philippine shells; a small but interesting collection of skulls and disarticulated and articulated skeletons; and the largest collection of Oregon insects in existence.

Course I.—*Invertebrate Zoology*.—Sophomore year; third term. A course devoted principally to the morphology, physiology and ecology of invertebrates. Particular attention is given to the study of the single celled forms since it is believed that the student can thus best gain an insight into the structure and physiological activities of the higher animals. Some of the types studied are the amœba, paramœcium, vorticella, sponge, hydra, starfish, crawfish, earthworm, mussel and grasshopper. Required in the courses in agriculture, household science and pharmacy. Seven hours a week. Laboratory deposit \$3.00.

Course II.—*Entomology*.—Junior year; first term. A study of the structure, classification and habits of insects, with particular reference to those which are beneficial or injurious. Instruction is given in methods of collecting, mounting and studying the life-histories of insects and in the preparation and use of insecticides. Required in the courses in agriculture and household science. Prerequisite, course I. Seven hours a week. Laboratory deposit \$1.00.

Course III.—*Vertebrate Zoology*.—Junior year; second term. A course devoted principally to the morphology and physiology of vertebrates. A careful comparative study is

made by dissections of several vertebrate types, particular attention being given to the Guinea pig as a type of the mammalia. The relation of function to structure is kept constantly in mind throughout the course which thereby becomes valuable as an introduction to the study of human physiology and veterinary science. Required in the courses in agriculture, household science and pharmacy. Seven hours a week. Prerequisite, course I. Laboratory deposit \$3.00.

Course IV.—*Physiology*.—Junior year; third term. A course in human physiology designed for students having a knowledge of general biology and of vertebrate anatomy. The student should also possess some knowledge of chemistry and physics. Required in courses in agriculture, household science and pharmacy. Prerequisites, courses I and III. Five hours a week.

Course V.—*Physiology*.—Junior year; second term. A course in the elements of human anatomy and physiology designed for students with no previous biological training. Text-book, lectures and demonstrations. Martin's Human Body. Required in the course in mechanical engineering. Five hours a week.

Course VI.—(a) *Evolution*.—Senior year; first term. A course of lectures and collateral reading on organic evolution; covering such topics as the evolution of evolution, variation, struggle for existence, heredity, etc. Prerequisites, courses I and III. Two hours a week. Elective.

(b) *Systematic Zoology*.—A discussion of the principles of zoological classification with particular reference to species of economic importance. Prerequisites, courses I and III. Three hours a week. Elective.

(c) *Advanced Entomology*.—A laboratory study of some restricted group of insects, of some particular species of economic importance, or of the insects affecting some particular crop. In this course students have free access to the collections and the library and records of the experiment station. The course extends throughout the year. Prerequisites, courses I and II. Seven hours a week. Elective.

Course VII.—(a) *Histology*.—Senior year; second term. A course of laboratory practice in fixing, hardening, imbedding, sectioning, staining, mounting and studying the tissues of the higher animals. Prerequisites, courses I and III. Seven hours a week. Elective.

(b) *Advanced Entomology*.—A continuation of course VI c.

Course VIII.—(a) *Embryology*.—Senior year; third term. Mainly a laboratory course in the study of the development of the frog and the chick, supplemented by a study of the general facts and principles of embryology. Prerequisites, courses I, III and VII a. Seven hours a week. Elective.

(b) *Advanced Entomology*.—A continuation of courses VI c and VII b. Seven hours a week. Elective.

BOTANY AND HORTICULTURE.

E. R. LAKE, M. S., Professor.

BOTANY.

The aim of the regular course in botany is to give the student such a knowledge of plants as will enable him to intelligently consider the various problems of plant life on the farm, in the field, garden or forest.

The student is taught to observe plants; to become acquainted with them by actual work with them.

The chief features of the work of this department are laboratory and field exercises supplemented by lectures and recitations. Text and reference books are used merely as guides, or for the purpose of furnishing suggestions to the student that he may be enabled to make the field, garden, greenhouse and laboratory work the more effective. The department has a good working equipment for the courses outlined, consisting of an herbarium especially rich in Oregon plants, models, charts, mounted and unmounted plants of the various orders and classes, preserved specimens, and laboratory and field appliances for both regular and special work.

Course I.—*Plant Morphology*.—Freshman year; third term. Laboratory and field exercises, together with recitations. The gross structure of our common flowering plants is the main topic of the term's work, though incidentally germination, growth, fertilization and fructification are considered. Each student is required to collect, mount, label and

classify 25-50 of the common field plants, and 10-25 samples of seeds of native plants. Five hours a week. Laboratory deposit, \$2.50. Gray's Lessons; Coulter's Plants.

Course II.—*Plant Histology*.—Sophomore year; first term. Laboratory work with the dissecting and compound microscopes. The exercises of this course cover the minute structure of the higher plants, together with a brief consideration of the lower forms of plant life. Seven hours a week. Laboratory deposit, \$3.25. Barnes' Plant Life.

Course III.—*Plant Physiology*.—Junior year; first term. Laboratory exercises and recitations. The subject is considered with special reference to the needs of the agriculturist and horticulturist. The principal part of the discussion is given to those phases of the subject that bear directly upon our cultivated crops. Seven hours a week. Laboratory deposit, \$3.00. Sorauer, Physiology of Plants; McDougal, Plant Physiology.

Course IV.—*Plant Pathology and Hygiene*.—Senior year; first term. Laboratory and field work supplemented by lectures and recitations. The common fungous foes of the cultivated field, orchard and garden crops, together with the means of prevention and remedy are considered at length. Elective. Seven hours a week. References, Lodeman, Weed and Massee.

Course V.—*Forestry*.—Senior year; second term. Forest trees, their care, culture and products. Forest areas and their type trees. Forest planting, preservation, and laws. Pacific Coast forests and their value as wealth producers. Timber trees and their diseases. Elective. Seven hours a week.

Course VI.—*Plant Products*.—Senior year; third term. Economic plants and their various preparations and uses.

History, development, and distribution of the plants that furnish the world with its chief supply of material for food, shelter, clothing, fuel, medicine and the arts. Elective. Seven hours a week.

Course VII.—*Systematic or Cryptogamic Botany*.—Senior year; third term. The work of this course is arranged to meet the needs of those electing it. In the systematic work, the student collects and classifies a hundred or more of the local plants, giving data as regards habitat, and distribution, and prepares a synopsis of the orders considered and species collected. Some time is also devoted to a study of current botanical literature.

In the cryptogamic work, the exercises are confined chiefly to a study of the comparative morphology of the fungi, algæ and other flowerless forms of plant life. Elective. Seven hours a week. Laboratory deposit, \$3.50.

The laboratory deposit in courses I, II, III and IV are required of all students, and are made to cover possible loss and breakage of apparatus used by the individual student. At the close of each term such balance as may remain, (and with carefulness, that would be five-sixths of the deposit) is returned to the student. All deposits are required to be made in advance.

HORTICULTURE.

The work in horticulture is so arranged as to give the student a working knowledge of the principles and practices of modern horticulture, especially applicable to Pacific Coast conditions and requirements.

The experiment station orchard of over two thousand fruit trees, shrubs and vines furnishes ample material for all phases of the work of the several courses.

Course I.—*Plant Propagation*.—Senior year; first term. House and field exercises in seeding, grafting, cutting, layering and budding, together with recitations. Five hours a week. Goff's Principles of Plant Culture.

Course II.—*Plant Culture*.—Senior year; second term. Lectures and recitations on orchard, garden and vineyard fruit crops, including selection of soils, planting, cultivating, pruning, harvesting, storing and marketing. Five hours a week. Bailey's Principles of Fruit Growing.

Course III.—(a) *Plant Evolution and Improvement*.—Senior year; third term. Lectures and recitations covering the various phases of evolution as bearing especially upon our cultivated plants, together with a discussion of the principles and practices of plant breeding and improvement by selection, and cross fertilization. Five hours a week. Bailey's Plant Breeding.

(b) *Landscape Gardening*. Lectures and recitations on the principles of home improvement, plants, their uses and abuses in adorning the grounds of city, suburban and country homes. Students are required to make plans for the improvement of some site selected, showing detail of buildings, walks, drives and the various plantings. Elective in the course in household science. Five hours a week.

ELOCUTION AND PHYSICAL CULTURE.

HELEN V. CRAWFORD, B. S., Professor.

ELOCUTION.

It is the design of this department to train the students to become intelligent and thoughtful readers. The individuality of the student is of the first importance. He is not made a slave to arbitrary rules, or allowed to become an imitator of his teacher; but he is taught to express his thoughts, convictions and emotions in accordance with his own temperament.

Courses I and II.—*Elocution*.—Freshman year; first and second terms. Analysis and rendering. Voice culture, physical culture. Two hours a week. Fulton and Trueblood.

Course III.—*Elocution*.—Sophomore year; first term. Voice culture, bodily expression, analysis and rendering. Two hours a week. Fulton and Trueblood.

Junior year.—Rhetorical exercises will be required throughout the junior year.

Courses IV, V and VI.—*Advanced Elocution*.—Senior year; first, second and third terms. Voice culture, rhythmic movements, literary analysis and rendering. Elective. Two hours a week. Fulton and Trueblood.

PHYSICAL CULTURE.

E. J. LEA, B. S., Instructor.

Physical training has recently been introduced into the college course as a regular drill for all lady students who are not physically disabled. As the gymnasium is not yet equipped with apparatus the class work is limited to the following exercises: Free movements, dumb-bells, clubs, fencing, bowling, and a variety of gymnastic games.

Course I.—*Physical Culture*.—Freshman year; first and second terms. Dumb-bells. This set of exercises is so designed that nearly all of the muscles of the body are brought into action. Free exercises and lively games are given as supplementary work.

Course II.—*Physical Culture*.—Sophomore year: first and second terms. Elementary clubs, supplemented with dumb-bells, free movements, gymnastic games, bowling, and the first principles of fencing.

Course III.—*Physical Culture*.—Junior year; second term. Elementary fencing, supplemented with free movements, bowling and gymnastic games.

FLORICULTURE AND GARDENING.

GEORGE COOTE, Professor.

Instruction in floriculture is given in the household science course. The student has the opportunity to familiarize himself with the methods of growing many varieties of decorative plants, and thus to become acquainted with their requirements as to temperature, soils and general cultivation.

Course I.—*Floriculture*.—Junior year; second term. Practical instruction is given in the best methods of plant propagation, potting and training.

In addition to the theoretical instruction in the class-room student also has the advantage of practical instruction in the well equipped greenhouses of the college.

BACTERIOLOGY.

EMILE F. PERNOT, Bacteriologist.

Within the last decade bacteria have laid a very strong hold on the thought and imagination of the scientific world, and have come to be looked upon as playing a most important part, not only in the production of disease and in fermentation, but also in many everyday processes hitherto supposed to be dependent on very different causes.

In consequence of this, bacteriology has been raised to the dignity of a science, and its ramifications have become so numerous and wide-spreading that many of the other sciences, and even some of the arts, have been freely pressed into the service of one or the other of its branches.

The study of bacteriology has made great strides both in the pathological and the technical branches of the subject; and just as investigations into the physiology of higher plants gave the first impetus to the establishment of agricultural experiment stations in all countries; so, in like manner, the physiology of fermentation and technical bacteriology have called into existence, within the last few years, a number of stations and laboratories for the development of those branches of industry wherein microörganisms play an important part.

This station and college has a well equipped bacteriological laboratory for the investigation and study of bacteriological diseases, both animal and vegetable.

The following courses of lectures and laboratory work has

been added to the college curriculum as an elective study in the senior year.

Course I.—*Bacteriology*.—Senior year; first term. A course in the elements of bacteriology, including lectures, and laboratory practice in sterilizing, making culture media, inoculating and growing cultures, studying cultural characteristics of certain definite species of bacteria, mounting, staining and examining slides, classification.

Course II.—*Dairy Bacteriology*.—Senior year; second term. Study of the bacterial diseases of milk, bacteria in the dairy, study of bacteria in butter making, and in cheese making. Study of yeasts and ferments.

Course III.—*Bacteriology*.—Senior year; third term. Lectures and laboratory work in pathogenic germ diseases of stock and poultry; a study of vaccines, their manufacture and use; of the nitrifying bacteria in leguminous plants; of bacteria in the soil and the bacterial analysis of water.

MUSIC.

DOROTHEA NASH, B. H. E., Instructor.

The value of music as a factor in educational training is daily becoming more and more recognized. Not only does it develop the æsthetic side of our nature, and by its language imbue an increased love of the beautiful, but by the modern way of committing all kinds of music to memory proves a means of strengthening the mind and training the intellect, which is not to be surpassed by any of the older and more established methods.

The board of regents have added an instructor on the piano to the teaching staff for the benefit of those students who desire to add this study to the usual course.

The "Krause" method used is acknowledged to be one of the best of the modern German methods, which by the use of its scientific technique exercises and its methods of tone production overcomes and makes interesting and fascinating the difficulties of piano practice.

Public recitals are given by the pupils in the department as often as possible, such appearances being of great value to the music student.

A certificate is given to students finishing the required course with its given amount of practice. No set pieces are given to each pupil, but in addition to the standard studies used, compositions of the modern composers are chosen to suit the individual needs of the student.

A charge of 50 cents for a lesson of forty-five minutes is made, or \$2.00 a month; no reduction for absences of which

no notice is given the teacher.. Each of the halls is furnished with a piano for practice.

An oratorio society has been organized in Corvallis, to which all students who sing will be made welcome.

The coming year the choral association will meet in Albany, bringing within reach of the students music which it is an education to hear and participate in.

Miss Nash, the instructor, has had four years' experience in teaching music and is now absent in London for further musical study.

The following is a programme played by pupils of the department:

1. (a) Adagio from Sonata C minor.....*Beethoven*
 (b) "Melodie"*Moszkowski*
2. Duett—Hungarian Dances Nos. 4 and 5.....*Brahms*
3. (a) Minuett—(b) Impromptu A♭.....*Schubert*
4. Serenata*Moszkowski*
5. Sonata Pathetique, op. 13.....*Beethoven*
6. (a) Caprice, E minor.....*Mendelssohn*
 (b) La Fileuse.....*Raff*
 (c) Theme and Variations, B♭*Schubert*
 (d) Valse, A♭.....*Moszkowski*

FREE-HAND DRAWING.

DOROTHEA NASH, B. H. E., Instructor.

No branch of education is more elevating or important than that of free-hand drawing, in that it cultivates the power of observation and trains the eye and hand. It is also an important aid in the study of many other branches; its value is appreciated in after life in every business, in many industries, and professional pursuits.

In this school object drawing is taught, beginning with the first principles of perspective, gradually advancing the student to the higher branches of art, with the exception of painting, which is not taught.

Course I.—*Elementary Drawing*.—Freshman year; first term. A course in the first principles of drawing including practice exercises and lectures. Three hours a week.

Course II.—*Elementary Drawing*.—Freshman year; second term. A course in drawing from simple objects. Three hours a week.

Course III.—*Elementary Drawing*.—Freshman year; third term. A continuation of course II. Students in the mechanical and electrical engineering course draw principally from mechanical subjects; those in the other courses, from casts and natural objects. Three hours a week.

Courses IV, V and VI.—*Advanced Drawing*.—Senior year. Advanced free-hand drawing including sketching from nature, is offered as an elective throughout the senior year. Five hours a week.

MILITARY.

MAJOR F. E. EDWARDS, Commandant.

The object of this department is so to instruct the cadet that upon graduation he will be thoroughly competent to hold a commission as a company officer in the national guard or volunteer army. Military drill improves the habits and manners of the student, develops him physically and gives him that military knowledge which it is desirable every citizen should possess that he may render intelligent aid to his country or state in time of need. It cultivates a manly spirit, ready and implicit obedience, respect for authority and self-restraint—all qualities of inestimable value to a young man.

Instruction in the course is prescribed for all undergraduate male students. Those who are physically unable to drill will be excused from regular duty upon the presentation of a disability certificate signed by a known physician. Such students may be assigned some light duty by the head of the department. The instruction is both practical and theoretical.

The battalion band, with twenty instruments, is under the instruction of a competent cadet officer as leader. Cadets of the band who wish to furnish their own instruments will receive a reasonable rental for the same from the college. Ordinarily no cadet will be assigned to the band until he is well instructed in the "school of the soldier" and the "school of the company."

The armory contains a drill room 70 x 120 feet in extent, an office and recitation room, and suitable rooms for storing

guns and other ordnance. Two hundred Springfield cadet rifles with equipments, two light artillery field pieces, and a liberal allowance of blank and ball cartridges are furnished by the ordnance department, U. S. army. The college has purchased the necessary band instruments, swords, bugles, colors, and signal apparatus for the thorough equipment of the department.

It is the intention to hold an encampment for two or three days annually if suitable camp equipage can be secured. The first annual encampment was held early in June, 1900.

The commissioned officers are selected from the senior class, the non-commissioned officers from the senior, junior and sophomore classes. Appointment of officers and non-commissioned officers, and their relative rank, is determined according to the military standing of cadets based upon a careful consideration of the following points: (1) Knowledge of drill and duties as determined by examination, practical application and recommendations of superior officers; (2) zeal, soldierly bearing and aptitude for command; (3) character; (4) military record; (5) general standing in the college.

All cadets are required to wear a uniform at all drills and other military exercises. This uniform costs about \$16.50. It is of dark blue cloth of an excellent quality and makes a very neat and serviceable school suit.

Course I.—*Military Drill*.—Freshman, sophomore, junior and senior years. The practical course in infantry includes the schools of the soldier, company and battalion, in close and extended order; ceremonies; guard and outpost duty; target practice and battle tactics. In artillery it includes the schools of the soldier, cannoneer and platoon, dismount-

ed; the mechanism, nomenclature and care of the 3.2 inch breech-loading field piece; the use of artillery in the field.

Those physically unable to bear arms, together with a limited number from the senior and junior classmen, are assigned to the signal corps, and are instructed in the usual methods employed in military signaling.

Course II.—*Military Science*.—Junior and senior years. The theoretical course embraces recitations in U. S. infantry and light artillery drill regulations, and outpost and guard duty manuals; instruction in reports and returns pertaining to a company; lectures on organization and administration of the U. S. army in peace and war; the volunteers and militia; tactics, strategy and logistics, and other military subjects.

U. S. Infantry Drill Regulations, Blunt's Small Arms Firing Regulations, U. S. Light Artillery Drill Regulations, Gidding's Manual of Signaling, Burnham's Duties of Outposts and Manual Guard Duty, Wagner's Elements of Military Science.

ROSTER.

STAFF AND NON-COMMISSIONED STAFF.

C. A. Saunders.....	First Lieutenant and Adjutant
M. C. Williams.....	Sergeant Major
A. Leavens.....	Quartermaster Sergeant
E. Clark	Chief Trumpeter

COLORS.

H. E. Junkin.....	Color Sergeant
F. N. Stump.....	Color Corporal
E. Dyer.....	Color Corporal

SIGNAL CORPS.

W. R. Dilley.....	Second Lieutenant and Signal Officer
H. Davis.....	Signal Sergeant
C. Chipman.....	Signal Corporal
C. Griffith.....	Signal Corporal

BAND.

T. E. Palmer.....First Lieutenant and Leader
M. Dukes.....Drum Major

SERGEANTS.

G. Winslow, F. Kruse, J. G. Garrow, E. W. Redd, F. Colvig.

CORPORALS.

C. A. Riddle, J. Wiley, R. Henkle, S. Harris.

THE LINE.

"A" COMPANY.	"B" COMPANY.	"C" COMPANY.
<i>Captain:</i> R. D. Burgess.	<i>Captain:</i> J. G. Elgin.	<i>Captain:</i> J. C. McCaustland.
<i>Lieutenants:</i> F. C. Walters, A. H. Frazier.	<i>Lieutenants:</i> H. E. Buxton, A. J. Bier.	<i>Lieutenants:</i> E. B. Aldrich, H. E. Penland.
<i>Sergeants:</i> A. L. Yoder, T. P. West, M. Moore, D. R. Barclay, C. F. Hawley.	<i>Sergeants:</i> A. Campbell, J. E. McBride, W. L. Sharp, M. F. Bridgess, R. M. Withycombe.	<i>Sergeants:</i> W. W. Garrow, S. Herbert, E. R. Shepard, F. Ward, I. Brown.
<i>Corporals:</i> W. L. Pate, J. E. Smith, F. C. Stevens, F. Steiwer, L. Millhollen, L. E. Kurtichanof.	<i>Corporals:</i> E. Tulley, L. Krap, s, C. Laughlin, W. S. Junkin, T. Bilyeu, L. Johnson.	<i>Corporals:</i> J. F. Scott, R. Goodrich, W. B. Hillman, W. E. Hanley, H. Tarter, J. W. Hartley.
<i>Bugler:</i> H. G. Humphreys.	<i>Bugler:</i> W. H. Flint.	<i>Bugler:</i> E. W. Yates.

THE EXPERIMENT STATION.

The station bears an important relation to the college, as the scientific investigations conducted at the station strongly support the instruction given in the class-room. Aside from the original investigations of an economic significance to agriculture, the work of the station affords daily object lessons in good modern farming.

About one hundred acres of the college farm are devoted to scientific and experimental farming. Animal husbandry is an important feature of station work. For this branch of the work Shorthorn and Jersey cattle, Cotswold and Shropshire sheep, and Berkshire swine are maintained. Among these, animals can be found of rare individual excellence, thus offering to the student in agriculture an opportunity to study the highest types of the respective breeds.

Extensive field trials are made in the growing of many varieties of cereals, grasses and forage plants, which are utilized in various feeding experiments conducted for the purpose of determining their value as stock foods. This work embraces the study of plant environment and the correlated subject of animal nutrition, thus supporting in a practical manner the science of agriculture as taught in the college.

Dairying is also a prominent feature of the station work. For this purpose a herd of typical dairy cows and a well equipped creamery are maintained. Many problems of vital interest to practical dairymen are constantly being worked out along the lines of rations for cows and methods for handling the herd. The student himself frequently assists in the work and thus obtains tangible evidence of the practical utility of the sciences in dairy husbandry.

The horticultural work of the station affords the student an admirable opportunity for comparing the work of the class room with the practices of the field. Plant breeding, cross pollination of fruits, as well as modern methods of planting, pruning, grafting, spraying and cultivation are all brought immediately under the observation of the student, thus affording him an excellent opportunity to become thoroughly conversant with the science and practice of horticulture.

SHORT COURSE.

This course is designed to meet the requirements of a large number of men and women in the state who have not the time or the means to take a full college course, and yet are desirous of obtaining a better equipment for their life-work than they now possess.

The course is given in the winter, for at this season the time can be better spared from the farm and orchard than at any other period. While the time will be subject to change to fit the regular college work, yet the course will be arranged to begin about the second week in January of each year, and extend over a period of from four to six weeks.

No special preparation is necessary as the instruction will be given by lectures and laboratory work. No examination is required to enter the course and no textbooks are used. It is the aim of this course to give to the student the largest possible amount of practical information regarding the various phases of agriculture and horticulture. Special attention is given to practical dairying.

The institution is well equipped for work in these lines. Laboratories, dairy building, green houses, and farm, all afford efficient means for illustration and work.

In addition to the course outlined, there are provided special lectures by practical men who have achieved success in some particular branch of agriculture or horticulture, or some other important industry of the state. These special lectures are provided without extra cost to the student, and are highly instructive and beneficial.

No tuition fee will be charged in this course. Those who attend will be expected to secure boarding places in the city or in the boarding halls of the college, provided the latter are not fully occupied by regular college students.

Reduced fare on all railroads in the state will be secured for those who attend this course.

For further information regarding this course application should be made to the president of the institution, or to the vice-director.

FARMERS' INSTITUTES.

One of the most useful methods of diffusing agricultural education is the farmers' institute. These institutes are especially helpful both to the farmer and the experiment station worker. The former secures scientific information upon topics of immediate interest to him and is instructed in its practical application to the farm; while the latter is brought to realize more vividly the needs and perplexities of the farmer. It is gratifying to note the growing demand for more of these institutes, and while the station is ever ready to accede to these demands, it is, however, becoming annually more difficult on the part of the station officials to fulfill these obligations, owing to the constant increase in the work of the station.

During the past year, twelve institutes were held in various sections throughout the state under the auspices of the station, with a total attendance of about 1,600.

LIBRARY.

The library occupies a large, well-lighted room on the first floor of the administration building, and contains nearly 3000 bound volumes of standard works on history, literature, arts, sciences, general subjects and fiction; as many more bound volumes of U. S. government publications and about 5000 pamphlets and bulletins. Care has been exercised in the selection of books in order that each department may have proper works of reference at the disposal of the student.

A card catalogue is used and the books are indexed according to subject by the decimal system, and alphabetically according to title and author, so that the use of the library is greatly facilitated and its resources upon any subject easily ascertained.

The library receives the leading literary and scientific magazines and journals, all of which are kept on file.

The library is open for the issuing of books every school-day from 8 a. m. to 5 p. m., and during that time the librarian is in constant attendance. Books, excepting cyclopedias and works of general reference, may be drawn out by students for a period not exceeding two weeks.

LIST OF STUDENTS.

GRADUATES.

NAMES.	DEGREE.	POSTOFFICE.	COUNTY.
Beach, Wm. H.....	B. S.	Oregon City	Clackamas.
Burnette, Minnie	B. H. S.	Corvallis	Benton.
Cauthorn, Franke J.....	B. H. S.	Corvallis	Benton.
Denman, Anna M.. . . .	B. L.	Corvallis	Benton.
Finley, Edna	B. H. E.	Corvallis	Benton.
Gatch, Grace	A. B.	Corvallis	Benton.
Groves, Mary Edna	B. S.	Corvallis.....	Benton.
Huffman, Jesse F.. . . .	B. S.	Philomath.....	Benton.
Jones, Mary.....	B. H. S.	Corvallis	Benton.
Jones, Thomas A.....	B. S.	Nome City, Alaska.	
Kidder, Alice J.....	B. H. S.	Corvallis.....	Benton.
Kyle, Ena.....	B. H. S.	Corvallis.....	Benton.
Lea, Erwin J.....	B. S.	Corvallis	Benton.
McBride, Idella Florence	B. H. S.	Shedd.....	Linn.
Murray, L. W.....	B. S.	Corvallis	Benton.
Nash, Dorothea.....	B. H. E.	Corvallis	Benton.
Small, Chas. E.....	B. M. E.	Corvallis	Benton.
Smith, Nolan R.....	B. S.	Dallas	Polk.
Stimpson, A. J.....	B. S.	Corvallis	Benton.
Woodcock, A. R.	B. S.	Corvallis	Benton.

SENIORS.

NAMES.	COURSE.	POSTOFFICE.	COUNTY.
Abrams, W. Carle.....	Mech.	Lincoln.....	Polk.
Aldrich, E. B.....	Agri.	Woodstock	Multnomah.
Bier, Arthur J.....	Mech.	Corvallis	Benton.
Burgess, R. D.....	Agri.	Marshfield	Coos.
Buxton, Harry E.....	Elec.	Corvallis	Benton.
Buxton, Minnie.....	H. S.	Corvallis	Benton.
Dilly, W. R.....	Agri.	Wren	Benton.
Elgin, J. Grant	Agri.	Corvallis	Benton.
Frazier, A. H.....	Mech.	Sheridan	Yamhill.
Fuller, Inez.....	H. S.	Corvallis	Benton.
Gallagher, J. H.....	Elec.	North Yamhill.	Yamhill.
Garrow, J. G.....	Mech.	Parkplace	Clackamas.
Garrow, W. W.....	Mech.	Parkplace	Clackamas.
Harris, Scott E.....	Phar.	Elgin	Union.
Hershner, Joyce.....	H. S.	Corvallis	Benton.

Hill, Garlin.....	H. S.	Independence ..Polk.
Jackson, Dora.....	H. S.	Corvallis .....Benton.
Junkin, H. E.....	Elec.	Corvallis ....Benton.
Kruse, Fred	Elec.	Marshfield .....Coos.
Leavens, Aubert.....	Mech.	Cascade Locks..Wasco.
Maxfield, Florence....	H. S.	Suver .....Polk.
McBride, J. E.....	Mech.	Shedd .....Linn.
McCaustland, J. C.....	Elec.	Corvallis .....Benton.
Noel, Leigh.....	Mech.	Santa Paula ....California.
Ownbey, Letia.....	H. S.	Oregon City ...Clackamas.
Palmer, T. E.....	Elec.	Grants Pass.....Josephine.
Penland, H. E.....	Agri.	Albany .....Benton.
Ranney, Lillie.....	H. S.	Corvallis .....Benton.
Rueter, Elsie.....	H. S.	Forest Grove ...Washington.
Saunders, C. Alfred..	Mech.	Empire.....Coos.
Smith, Etta.....	H. S.	Corvallis .....Benton.
Smith, F. W.....	Mech.	Parkplace .....Clackamas.
Starr, M. Eva.....	H. S.	Corvallis .....Benton.
Walters, F. C.....	Mech.	Monroe .....Benton.
West, Theo. P.....	Mech.	Clatsop.....Clatsop.
Winslow, Glenn.	Agri.	Newberg .. ....Yamhill.

JUNIORS.

NAMES.	COURSE.	POSTOFFICE.	COUNTY.
Burton, Ivy.....	H. S.	Independence...	Polk.
Campbell, Etta.....	H. S.	Ballston.	Polk.
Garrow, Edna	H. S.	Corvallis.....	Benton.
Hillman, Ethelwyn	H. S.	Corvallis.	Benton.
Hoover, Lizzie.....	H. S.	Fossil	Wheeler.
Hoover, Maude.....	H. S.	Fossil	Wheeler.
Jones, Mabel L.....	H. S.	Brooks	Marion.
Kyle, Ethel.....	H. S.	Corvallis	Benton.
Michael, Bessie	H. S.	Corvallis	Benton.
Riddle, Blanche.....	H. S.	Riddle	Douglas.
Rusk, Imogen E.....	H. S.	Milwaukie	Clackamas.
Smith, Bessie.....	H. S.	Salem	Marion.
Wilson, Flora.....	H. S.	Canyonville	Douglas.
Withycombe, Mabel.	H. S.	Corvallis	Benton.
Colvig, Fred L.....	Phar.	Grants Pass.....	Josephine.
Davis, Mabel.....	Phar.	Corvallis	Benton.
Holden, Blanche.....	Phar.	Oregon City	Clackamas.
Reid, Mrs. Esther.....	Phar.	Corvallis	Benton.
Stalker, John L.....	Phar.	Carson.....	Union.
Ward, Frank A.....	Phar.	Plainview	Linn.
Williams, M. C.....	Phar.	Airlie	Polk.
Brown, Ivan.....	Agri.	Hockiusion	Wash. State.

Junkin, W. S	Agri.	Corvallis	Benton.
Moore, Mountain.....	Agri.	Express	Baker.
Withycombe, Robert.....	Agri.	Corvallis	Benton.
Bridgess, M. F.....	Mech.	Hillsboro.....	Washington.
Campbell, Alfred	Mech.	Ballston	Polk.
Chipman, Clarence B.....	Mech.	Corvallis	Benton.
Davis, Harry.....	Mech.	Corvallis	Benton.
Dyer, Edward L.....	Mech.	Albany.....	Linn.
Hawley, C. F.....	Mech.	Wildwood ..	Lane.
Herbert, Stanley D.....	Mech.	Corvallis ..	Benton.
Kraps, Leo	Mech.	Salem	Marion.
Pate, W. L.....	Mech.	Jefferson	Marion.
Scott, J. F.....	Mech.	Tangent	Linn.
Scott, William B.....	Mech.	Milwaukie	Clackamas.
Sharp, W. L.....	Mech.	Corvallis ..	Benton.
Shepard, E. R.....	Mech.	Zena	Polk.
Wiley, John	Mech.	Myrtle Creek ..	Douglas.
Yoder, Aaron L.....	Mech.	Needy	Clackamas.

SOPHOMORES.

NAMES.	COURSE.	POSTOFFICE.	COUNTY.
Abbe, Mabel.....	H. S.	Summit	Benton.
Allen, Ina Pearl.....	H. S.	Amity	Yamhill.
Applegate, Rachel L.....	H. S.	Yoncalla	Douglas.
Belknap, Frances E.	H. S.	Corvallis	Benton.
Danneman, Carrie.....	H. S.	Clem.....	Gilliam.
Ewing, Gertrude.	H. S.	Fulton	Multnomah.
Garret, Rena.....	H. S.	Corvallis	Benton.
Herbert, Myrtle.....	H. S.	Corvallis	Benton.
Hodgin, Dora	H. S.	Independence ..	Polk.
James, Julia.....	H. S.	Suver	Polk.
Jones, Katharine... ..	H. S.	Independence ..	Polk.
Mattley, Maud.....	H. S.	Corvallis	Benton.
Michael, Grace.....	H. S.	Corvallis	Benton.
Miner, Christal.....	H. S.	Corvallis	Benton.
Parsons, Stella... ..	H. S.	Albany	Linn.
Shelton, Pearl.....	H. S.	Arlington.....	Gilliam.
Small, Linnie.....	H. S.	Silver Lake.....	Lake.
Smith, Ethel... ..	H. S.	Salem.....	Marion.
Smith, Kittie	H. S.	Gervais	Marion.
Steiwier, Helen.. ..	H. S.	Jefferson.....	Marion.
St. Germain, Elizabeth...	H. S.	Corvallis.....	Benton.
Thompson, Orla.....	H. S.	Pratum.....	Marion.
Wittschen, Virgene.	H. S.	Turner	Marion.
Cockrell, M. J.....	Phar.	Corvallis.....	Benton.
Harding, G. L.....	Phar.	Oregon City ...	Clackamas.
Hartley, Jas. W	Phar.	Lorane	Lane.

Holland, V. Constance...	Phar.	Salem.....	Marion.
Humphreys, Lester W....	Phar.	Canyonville	Douglas.
McGillivray, A. E	Phar.	Shaw	Marion.
Millhollen, L. F	Phar.	Oakville	Linn.
Morrison, W. J	Phar.	Oakville.....	Linn.
Redd, E. W	Phar.	Carlton	Yamhill.
Sturgeon, Maude... ..	Phar.	Tillamook.....	Tillamook.
Weber, Eugene	Phar.	Corvallis... ..	Benton.
Barclay, Ross.....	Agri.	Monroe	Benton.
Barnhart, Ray.....	Agri.	Corvallis	Benton.
Gallagher, F. R.....	Agri.	North Yamhill.	Yamhill.
Goodrich, Ray.....	Agri.	North Yamhill.	Yamhill.
Hanley, W. E.....	Agri.	Hillsboro.....	Washington.
Horner, Chas. H.....	Agri.	Salem	Marion.
Houston, Fred C.....	Agri.	Mohawk.....	Lane.
Shepard, R. C.....	Agri.	Zena	Polk.
Smith, John E.....	Agri.	Amity	Polk.
Smith, Minnie G.....	Agri.	Latourelle.....	Multnomah.
Stephens, F. C.....	Agri.	Corvallis.....	Benton.
Tarter, Herman V.....	Agri.	Corvallis,	Benton.
Tedrow, E. A.....	Agri.	Monmouth	Polk.
Tully, Edgar.....	Agri.	Wallowa.....	Wallowa.
Van Groos, William.....	Agri.	Corvallis	Benton.
Alspaugh, A. M.....	Mech.	Eagle Creek	Clackamas.
Archibald, Robert C.....	Mech.	Tangent.....	Linn.
Baxter, Elmer	Mech.	Dayton.....	Yamhill.
Bilyeu, Thomas.....	Mech.	Athens	Umatilla.
Bruce, Bert W.....	Mech.	Turner	Marion.
Fruit, D. A	Mech.	Peoria.....	Linn.
Griffith, Carl	Mech.	Clymer.....	Marion.
Hillman, W. B.....	Mech.	Corvallis	Benton.
Jackson, E. P.....	Mech.	Cleone.....	Multnomah.
Johnson, Luther	Mech.	Portland	Multnomah.
Kurtichanof, L. E.....	Mech.	Chitwood.....	Lincoln.
Lane, Ralph.....	Mech.	Corvallis ..	Benton.
Lanka, Robert.....	Mech.	Grade	Wheeler.
Laughlin, Chester W... ..	Mech.	North Yamhill.	Yamhill.
Leadbetter, N. W.....	Mech.	Corvallis.....	Benton.
Lusted, Harry	Mech.	Troutdale.....	Multnomah.
Martin, Harold.....	Mech.	Corvallis.....	Benton.
Mattley, L. G....	Mech.	Corvallis	Benton.
McTimmonds, Fred.....	Mech.	Dallas.....	Polk.
Riddle, Claude.....	Mech.	Riddle	Douglas.
Starr, Artie.....	Mech.	Monroe.....	Benton.
Steiwer, Fred.....	Mech.	Jefferson.....	Marion.
Thurston, Sam.....	Mech.	Suver	Polk.
Underwood, Irving M....	Mech.	Sherar's Bridge.	Sherman.
Wilson, Bush	Mech.	Corvallis	Benton.

FRESHMEN.

NAME.	COURSE.	POSTOFFICE.	COUNTY.
Anderson, Claudia...	H. S.	Corvallis	Linn.
Baldwin, Edith	H. S.	Corvallis.....	Benton.
Barclay, Gertrude.....	H. S.	Monroe	Benton.
Berthold, Edith J.....	H. S.	Corvallis	Linn.
Blakeslee, Clara.....	H. S.	Corvallis	Benton.
Canfield, Elsie M.....	H. S.	La Fayette.....	Yamhill.
Chipman, Laura	H. S.	Corvallis	Benton.
Chipman, Rosamond.....	H. S.	Corvallis	Benton.
Crawford, Clara C.....	H. S.	Elk City.....	Lincoln.
Cummings, Sibyl.....	H. S.	Shaw.....	Marion.
Cunningham, Wavelle....	H. S.	Arlington.....	Gilliam.
Dixon, Sadie.....	H. S.	Corvallis	Benton.
Ellis, Grace.....	H. S.	Corvallis	Benton.
Finley, Ada.....	H. S.	Corvallis	Benton.
Gallagher, Lizzie A.....	H. S.	North Yamhill.	Yamhill.
Harden, Beulah	H. S.	Corvallis	Benton.
Hibbs, Edna M.....	H. S.	Gaston	Washington.
Hibbs, Mamie H... ..	H. S.	Gaston	Washington.
Horning, Odalite.....	H. S.	Silver Lake.....	Lake.
Horton, Alice.....	H. S.	Monroe	Benton.
Howard, Edith.....	H. S.	Prineville	Crook.
Ingram, Rose.....	H. S.	Monroe	Benton.
Johnson, Lillian.. ..	H. S.	Vale	Malheur.
Johnson, Viola.....	H. S.	Vale	Malheur.
Looney, Marguerite.....	H. S.	Jefferson	Marion.
McGillivray, Eliza	H. S.	Shaw	Marion.
McGillivray, Lena.....	H. S.	Shaw	Marion.
Miller, Nora.....	H. S.	Corvallis	Benton.
Miner, Christie	H. S.	Corvallis	Benton.
LaFrance, Fay.....	H. S.	Hood River.....	Wasco.
Linville, Ethel E.	H. S.	Corvallis.. ..	Benton.
Michael, Effie.....	H. S.	Corvallis.....	Benton.
Olson, Kathryn.....	H. S.	Catlin	State of Wash.
Rusk, Leena.....	H. S.	Milwaukie.....	Clackamas.
Rycraft, Mildred.....	H. S.	Alsea.....	Benton.
Smith, Ida May.....	H. S.	Zena	Polk.
Smith, Mae.....	H. S.	Zena	Polk.
Smith, Nellie B.....	H. S.	Zena	Polk.
Smith, Robena.....	H. S.	Corvallis	Benton.
Starr, M. Elva.....	H. S.	Corvallis	Benton.
Starr, Mamie.....	H. S.	Monroe	Benton.
St. Germain, Inez.....	H. S.	Corvallis	Benton.
Stites, Daisy M.....	H. S.	Williams	Josephine.
Tarter, Lena Belle.....	H. S.	Corvallis	Benton.

Weber, Agnes.....	H. S.	Corvallis	Benton.
Winniford, Florence E...	H. S.	Wren	Benton.
Winniford, Mary E.....	H. S.	Wren	Benton.
Wyatt, Minnie.....	H. S.	Corvallis	Benton.
Belt, Harold.....	Phar.	Corvallis	Benton.
Daniel, Lulu B	Phar.	Corvallis	Benton.
Dempsey, Fred.....	Phar.	Portland.....	Multnomah.
Dupuy, Harry E.....	Phar.	La Fayette	Yamhill.
Hamilton, Ira P.....	Phar.	Salem.....	Marion.
Healy, Bert.....	Phar.	Corvallis.....	Benton.
Humphreys, Harvey G...	Phar.	Hillsboro.....	Washington
Humphreys, John A.....	Phar.	Canyonville....	Douglas.
Irvine, Edna.....	Phar.	Corvallis	Benton.
Kinney, Albert.....	Phar.	Astoria	Clatsop.
Locke, Elsie.....	Phar.	Corvallis	Benton.
Maxfield, Roy.....	Phar.	Corvallis	Benton.
Mayfield, Byram.....	Phar.	Elgin.....	Union.
Randall, Julia	Phar.	Corvallis	Benton.
Rosendorf, Edward	Phar.	Independence...	Polk.
Sheasgreen, Harriett A...	Phar.	Corvallis	Benton.
Simpson, Merle	Phar.	Corvallis	Benton.
Spencer, Victor	Phar.	Corvallis	Benton.
Standlee, John B.....	Phar.	Corvallis	Benton.
Thompson, Edith	Phar.	Corvallis	Benton.
Tuttle, Gerald	Phar.	Summerville ..	Union.
Wells, Walter	Phar.	Corvallis	Benton.
Williams, Opal.....	Phar.	Junction City...	Lane.
Wills, Bert G.....	Phar.	Hillsboro.....	Washington.
Witzel, Curtis C.	Phar.	Turner	Marion.
Witzel, Dolph.....	Phar.	Turner	Marion.
Woods, J. M.....	Phar.	Corvallis	Benton.
Bellinger, Bruce M.....	Agri.	Woodstock	Multnomah.
Billings, Ralph	Agri.	Ashland.....	Jackson.
Buchanan, Claude.....	Agri.	Corvallis	Benton.
Carnahan, Frank.....	Agri.	Astoria	Clatsop.
Elgin, Ben.....	Agri.	Corvallis	Benton.
Fletcher, William R.....	Agri.	Vancouver.....	State of Wash.
Gearhart, J. Neal.....	Agri.	Astoria.....	Clatsop.
Gerking, A. D	Agri.	Corvallis	Benton.
Harder, Ralph.....	Agri.	Melville.....	Clatsop.
Jensen, Claude.....	Agri.	Gaston	Washington.
Johnson, J. Edwin.....	Agri.	Vale.....	Malheur.
Junkin, James B.....	Agri.	Corvallis	Benton.
Kissling, Jake P	Agri.	Pratum.....	Marion.
Luttrell, Roy S.....	Agri.	Myrtle Point...	Coos.
McLaughlin, Earl.....	Agri.	Milwaukie.....	Clackamas.
Robinson, C. C.....	Agri.	Junction City...	Lane.
Thompson, G. H.....	Agri.	Pratum.....	Marion.

Westenhiser, Fred	Agri.	Yoncalla	Douglas.
Whitney, Ira P.	Agri.	Chitwood	Lincoln.
Wicks, Wm. H.	Agri.	Corvallis	Benton.
Winniford, Walter	Agri.	Wren	Benton.
Yates, Bert	Agri.	Corvallis	Benton.
Yates, Wilber	Agri.	Corvallis	Linn.
Abrams, Chester	Mech.	Lincoln	Polk.
Barnhart, Charles	Mech.	Corvallis	Benton.
Bartmess, E. K.	Mech.	Hood River	Wasco.
Bartmess, M. W.	Mech.	Hood River	Wasco.
Beaty, Edward	Mech.	Ballston	Polk.
Beaver, C. W.	Mech.	Salem	Marion.
Bogue, Floyd	Mech.	Corvallis	Benton.
Clark, Elwood	Mech.	Corvallis	Benton.
Danilson, Frank	Mech.	Ontario	Malheur.
Davidson, Barton	Mech.	Hood River	Wasco.
Derby, Arthur N.	Mech.	Salem	Marion.
Dukes, Maltie	Mech.	Hood River	Wasco.
Evans, H. B.	Mech.	Estrup	Lane.
Fischer, Fred	Mech.	Corvallis	Benton.
Flint, William	Mech.	Woodburn	Marion.
Fox, Josiah	Mech.	Halsey	Linn.
Fry, Thomas	Mech.	Corvallis	Benton.
Gallogly, J. A.	Mech.	Oregon City	Clackamas.
Gillette, Glenn	Mech.	Corvallis	Benton.
Glover, Walter G.	Mech.	Eagle Creek	Clackamas.
Greear, J. C.	Mech.	Hillsboro	Washington.
Harden, Delbert	Mech.	Corvallis	Benton.
Harding, C. B.	Mech.	Oregon City	Clackamas.
Harritt, Frank	Mech.	Salem	Marion.
Heston, Arthur C.	Mech.	Dundee	Yamhill.
Horton, John C.	Mech.	Monroe	Benton.
Howard, John	Mech.	Prineville	Crook.
Howard, Roy	Mech.	Prineville	Crook.
Hubler, John	Mech.	Corvallis	Benton.
Jamieson, Wm. D.	Mech.	Raleigh	Washington.
Lewis, Cecil H.	Mech.	Astoria	Clatsop.
Lieser, Herbert	Mech.	Vancouver	State of Wash.
McTimmonds, J. V.	Mech.	Dallas	Polk.
Osburn, Guy	Mech.	Corvallis	Benton.
Pate, Frank C.	Mech.	Jefferson	Marion.
Pugh, Harvey G.	Mech.	Shedd	Linn.
Rice, Geo. H.	Mech.	The Dalles	Wasco.
Roake, Chester	Mech.	Oregon City	Clackamas.
Robinson, R. H.	Mech.	Junction	Lane.
Smith, R. W.	Mech.	Corvallis	Benton.
Tanner, Albert H.	Mech.	Mount Tabor	Multnomah.
Tharp, Zophar	Mech.	Bellevue	Yamhill.

Thrasher, Frank.....	Mech.	Corvallis.....	Benton.
Van Orsdel, John.....	Mech.	Dallas.....	Polk.
Williams, W. H.....	Mech.	Airlie.....	Polk.
Woodcock, C. H.....	Mech.	Corvallis.....	Benton.
Yates, Roy.....	Mech.	Corvallis.....	Linn.

SUB-FRESHMEN.

NAME.	POSTOFFICE.	COUNTY.
Adamson, A. W.....	Rowland.....	Linn.
Applegate, Eva.....	Yoncalla.....	Douglas.
Applegate, Eva.....	Yoncalla.....	Douglas.
Bamford, Frank.....	Junction City.....	Lane.
Bradley, Ruby.....	Corvallis.....	Benton.
Burgess, Myrtle....	Sheridan.....	Yamhill.
Castle, Mac.....	Saginaw.....	Lane.
Cathey, Cecil C.....	Corvallis.....	Benton.
Cathey, Geo. A.....	Corvallis.....	Benton.
Cleek, W. M.....	Junction City.....	Lane.
Delaney, Jas.	Mountain Dale.....	Washington.
Dilley, Lucy A.....	Wren.....	Benton.
Freeman, Louis A.....	Eagle Creek.....	Clackamas.
Galbreath, Lottie.....	Tualatin.....	Washington.
Galbreath, Nettie.....	Tualatin.....	Washington.
Gellatly, David N. .	Philomath.....	Benton.
Gordon, Frank.....	Glencoe.....	Washington.
Groshong, Fred M	Hoskins.....	Benton.
Hamilton, Lowry.....	Salem.....	Marion.
Hamilton, Wm.....	Crawfordsville.....	Linn.
Hess, Robert....	Vale.....	Malheur.
Ingalls, Melville.....	Melville.....	Clatsop.
Jackson, Claude.....	Hillsboro.....	Washington.
Lithgow, Walter.....	Eugene.....	Lane.
Lyells, Edward.....	Vale.....	Malheur.
Mann, Smith.....	Roseburg.....	Douglas.
Maxwell, Seth.....	Arlington.....	Gilliam.
McArthur, F. J.....	New Era.....	Clackamas.
Milne, John.....	Hillsboro.....	Washington.
Morton, Reuben.....	Vale.....	Malheur.
Morton, Wm.....	Vale.....	Malheur.
Packer, Clyde.....	Portland.....	Multnomah.
Ramsey, Oliver P.....	Portland.....	Multnomah.
Stimpson, Hettie M.....	Newport.....	Lincoln.
Tedrow, Clarence.....	Monmouth.....	Polk.
Tohl, Herman.....	Nehalem.....	Tillamook.
Ward, Fred.....	Plainview.....	Linn.
Wells, Ivan.....	Vale.....	Malheur.
Whitaker, Margaret.....	Corvallis.....	Benton.

Whiteside, Clarence.....	Corvallis.....	Benton.
Wicklund, Elmer.....	Vale.....	Malheur.
Wilkes, Marion.....	Cornelius.....	Washington.

SPECIAL STUDENTS.

NAME.	POSTOFFICE.	COUNTY.
Alexander, Alice M.	Corvallis.....	Benton.
Alexander, Ethel M.....	Corvallis.....	Benton.
Baber, Emma H.....	Junction City	Lane.
Bickner, Mary A.....	Oswego.....	Clackamas.
Bryson, Mrs. Mary.....	Corvallis.....	Benton.
Burnaugh, Lewie.....	Elgin	Union.
Burnett, Bruce.....	Corvallis.....	Benton.
Butcher, Emmet....	Arlington.....	Gilliam.
Butcher, Harry	Custer City.....	South Dakota.
Clark, Jennie F.....	Corvallis.....	Benton.
Cockrell, Mabel	Corvallis.....	Benton.
Crawford, Mamie	Corvallis.....	Benton.
De Armond, Richard S...	Grant's Pass.....	Josephine
Daniel, I. R.....	Corvallis.....	Benton.
Elgin, Melvena.....	Corvallis	Benton.
Evans, W. R.	Portland.....	Multnomah.
Erwin, Cecil.....	Corvallis.....	Benton.
Fields, D. L.	Philomath..	Benton.
Goodnough, M. A.....	Corvallis.....	Benton.
Hall, Harley L.....	Wells.....	Benton.
Harlan, Nettie.....	Corvallis.....	Benton.
Henkle, Raymond.....	Corvallis.....	Benton.
Jackson, Leona	Corvallis.....	Benton.
Jones, Ilda E.	Brooks	Marion.
Keady, Mabel.....	Corvallis	Benton.
Miner, Zelia.....	Corvallis.....	Benton.
Oleman, Ida.....	Corvallis.....	Benton.
Ranne, Belle	Corvallis.....	Benton.
Rickey, Ethel.....	Albany.....	Linn.
Rose, W. E.....	Elgin	Union.
Scholl, David J.....	Hubbard	Marion.
Shuck, Viola P.....	Monitor	Marion.
Small, Belle	Silver Lake	Lake.
Smith, Cassius A.....	Dallas.....	Polk.
Smith, Walter Floyd.....	Sublimity	Marion.
Spangler, Lulu.....	Corvallis	Benton.
Staats, Bertha A	Airlie	Polk.
Stewart, Lenore.....	Corvallis	Benton.
Stewart, Ethel.....	Salem.....	Marion.
Strong, Harold W.....	Corvallis	Benton.

Stump, Fred N.....	Salem ..	Marion.
Thompson, Aura D.....	Stafford	Clackamas.
Wellsher, Ceicle I.....	Corvallis	Benton.
West, Paul H.....	Warrenton	Clatsop.
Wilson, Teresa G.	Alsea.....	Benton.
Witzel, Herbert C.	Turner	Marion.
Wood, Homer S.....	Arlington	Gilliam.
Zurcher, James D.....	Enterprise.....	Wallowa.

RECAPITULATION.

Graduates	20
Seniors.....	36
Juniors	40
Sophomores	74
Freshmen	145
Sub-Freshmen	42
Specials	48
Total.....	405
Number of Counties in Oregon.....	33
Number of Counties represented.....	27

COMPARATIVE STATEMENT OF ENROLLMENT.

<i>Year.</i>	<i>Sub-Freshmen.</i>	<i>Preparatory.</i>	<i>Freshmen.</i>	<i>Sophomores.</i>	<i>Juniors</i>	<i>Seniors</i>	<i>Graduate Students.</i>	<i>Special.</i>	<i>Total.</i>
1888-1889.....		36	33	14	14	0	0	0	99
1889-1890.....		67	55	17	6	0	6	0	151
1890-1891.....		76	83	24	15	0	3	0	201
1891-1892.....		86	63	28	19	9	3	0	208
1892-1893.....		98	123	31	18	7	5	0	282
1893-1894.....		36	103	71	21	5	4	0	240
1894-1895.....		47	85	64	52	13	0	0	261
1895-1896.....		80	175	63	54	9	14	2	397
1896-1897.....			157	80	29	17	11	25	317
1897-1898.....			151	75	45	26	15	24	336
1898-1899.....			164	79	30	36	15	14	338
1899-1900.....	42		145	74	40	36	20	48	405

NOTE TO THE ALUMNI.

As announced in 1898, the catalogue for 1900-01 will contain a full list of the alumni and alumnae of the Oregon Agricultural College. For the purpose of securing accuracy and to enable the committee to issue the next catalogue at an early date, all graduates of this institution are requested to notify the President or the Dean of the college of any change of residence or occupation.

It is desirable that all information of this kind be in possession of the officers above named not later than May 1, 1901.

LIST OF EXAMINERS.

The graduates of this institution, whose names appear below, have consented to conduct entrance examinations for applicants residing in their respective counties or districts:

Hon. J. K. Weatherford, Albany, Oregon.
Superintendent George Denman, for Benton County.
Austin T. Buxton, Forest Grove.
G. W. Palmer, Baker City.
William F. Keady, P. O. Box 818, Portland.
Effie Willis, Marshfield.
Lena Willis, Roseburg.
Arthur C. Lewis, Klamath Falls.
Rose Horton, Bridal Veil.
Prof. W. W. Bristow, McMinnville.
D. P. Adamson, Prineville.
Lyle Lawrence, Oregon City.

Pupils who have completed the state course of study and passed the required examination thereon according to the regulations prescribed by the state board of education for conducting uniform examinations for graduation, and evidenced by a diploma signed in accordance with such rules, will be admitted to the freshman year without further examination; provided, that such pupils must be at least fifteen years of age.

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OF THE

STATE OF OREGON

FOR

1900-1901

AND

ANNOUNCEMENTS FOR 1901-1902.

CORVALLIS, OREGON.

AGRICULTURAL COLLEGE PRINTING OFFICE.
GEO. B. KEADY, PRINTER.
1901.

CALENDAR--1901-'02.

SEPTEMBER.							JANUARY.							MAY.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
1	2	3	4	5	6	7	1	2	3	4	1	2	3
8	9	10	11	12	13	14	5	6	7	8	9	10	11	4	5	6	7	8	9	10
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...
OCTOBER.							FEBRUARY.							JUNE.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
...	...	1	2	3	4	5	1	1	2	3	4	5	6	7
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13	14	15	16	17	18	19	9	10	11	12	13	14	15	15	16	17	18	19	20	21
20	21	22	23	24	25	26	16	17	18	19	20	21	22	22	23	24	25	26	27	28
27	28	29	30	31	23	24	25	26	27	28	...	29	30
...
NOVEMBER.							MARCH.							JULY.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
...	1	2	1	1	2	3	4	5
3	4	5	6	7	8	9	2	3	4	5	6	7	8	6	7	8	9	10	11	12
10	11	12	13	14	15	16	9	10	11	12	13	14	15	13	14	15	16	17	18	19
17	18	19	20	21	22	23	16	17	18	19	20	21	22	20	21	22	23	24	25	26
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...	30	31
DECEMBER.							APRIL.							AUGUST.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
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15	16	17	18	19	20	21	13	14	15	16	17	18	19	10	11	12	13	14	15	16
22	23	24	25	26	27	28	20	21	22	23	24	25	26	17	18	19	20	21	22	23
29	30	31	27	28	29	30	24 31	25	26	27	28	29	30

CALENDAR.

FIRST TERM.

Entrance Examinations for Freshmen, Friday and Saturday, September 20-21, 1901.

Matriculation, Monday, September 23, 1901.

Work of Term begins Tuesday, September 24, 1901.

Term closes Friday, December 20, 1901.

SECOND TERM.

Term begins Friday, January 3, 1902.

Term closes Thursday, March 27, 1902.

THIRD TERM.

Term begins Monday, March 31, 1902.

Term closes Friday, June 13, 1902.

Baccalaureate Sermon, Sunday, June 15, 1902.

Commencement Day, Wednesday, June 18, 1902.

NOTE.—The standings of students will be sent to parents or guardians on application to the President or the Dean.

Examinations will be held at the close of each term.

BOARD OF REGENTS
OF THE
OREGON AGRICULTURAL COLLEGE
AND
EXPERIMENT STATION.

OFFICERS.

HON. J. T. APPERSON, *President*.....Oregon City.
HON. JOHN D. DALY, *Secretary*.....Corvallis.
HON. B. F. IRVINE, *Treasurer*.....Corvallis.

EX-OFFICIO MEMBERS.

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HON. F. I. DUNBAR, *Secretary of State*.....Salem.
HON. J. H. ACKERMAN, *Supt. of Public Instruction*Salem.
HON. B. G. LEEDY, *Master of State Grange*.....Tigardville.

APPOINTED BY THE GOVERNOR.

TERM EXPIRES.

HON. BENTON KILLIN.....Portland, 1903.
HON. J. M. CHURCHLa Grande, 1903.
HON. JOHN D. OLWELL.....Central Point, 1903.
HON. WM. E. YATES.....Corvallis, 1907.
HON. JOHN D. DALY.....Corvallis, 1907.
HON. B. F. IRVINE.....Corvallis, 1907.
HON. J. T. APPERSON.....Oregon City, 1910.
HON. W. P. KEADY.....Portland, 1910.
HON. J. K. WEATHERFORD.....Albany, 1910.

STANDING COMMITTEES
OF THE
BOARD OF REGENTS.

EXECUTIVE COMMITTEE.

J. T. Apperson, *Chairman*, J. K. Weatherford, J. D. Daly, W. P. Keady, B. G. Leedy.

COLLEGE COMMITTEE.

B. F. Irvine, *Chairman*, W. P. Keady, J. D. Olwell.

STATION COMMITTEE.

Benton Killin, *Chairman*, B. G. Leedy, J. K. Weatherford.

FACULTY AND INSTRUCTORS.

THOMAS MILTON GATCH, A. M. Ph. D., President and Director,
Political and Mental Science.

JAMES WITHYCOMBE, M. AGR., Vice-Director,
Professor of Agriculture.

FREDERICK BERCHTOLD, A. M., Dean of College,
Professor of History and Latin.

MARGARET COMSTOCK SNELL, M. D.,
Professor of Household Science and Hygiene.

ELLEN JANET CHAMBERLIN, A. M., Dean of Women,
Professor of German and Instructor in English.

GRANT ADELBERT COVELL, M. E.,
Professor of Mechanics and Mechanical Engineering.

JOHN B. HORNER, A. M., Litt. D.,
Professor of English and Literature.

GORDON VERNON SKELTON, C. E.,
Professor of Mathematics and Engineering.

ARTHUR BURTON CORDLEY, M. S.,
Professor of Zoölogy.

EDWARD RALPH LAKE, M. S.,
Professor of Botany and Horticulture.

ABRAHAM LINCOLN KNISELY, M. S.,
Professor of Chemistry.

HELEN VIRGINIA CRAWFORD, B. S.,
Professor of Elocution.

GEORGE COOTE,
Professor of Floriculture and Gardening.

JOHN FULTON, B. S.,
Assistant Professor of Chemistry and Assaying.

OREGON AGRICULTURAL COLLEGE.

7

IDA BURNETT CALLAHAN, B. S.,
Assistant Professor of English.

FRED LEROY KENT, B. AGR.,
Assistant Professor of Agriculture and Dairying.

ERNEST CHESNEY HAYWARD, E. E.,
Assistant Professor of Mechanical and Electrical Engineering.

CHARLES LESLIE JOHNSON, B. S.,
Instructor in Mathematics.

EMILE FRANCIS PERNOT,
Professor of Bacteriology.

CLARENCE MELVILLE MCKELLIPS, PH. C.,
Assistant Chemist and Instructor in Pharmacy.

FRED MORGAN MCELFFRESH, B. S.,
Instructor in Zoölogy.

MARK CLYDE PHILLIPS, B. M. E.,
Instructor in Mechanical Drawing and Ironwork.

FARLEY DOTY McLOUTH, B. S.,
Instructor in Freehand Drawing.

DANIEL WILLIAM PRICHARD,
Instructor in Woodwork.

MAJOR FRANK EDELMAN EDWARDS, Commandant,
Military Science and Tactics.

JACOB BRUCE PATTERSON, A. B.,
Physical Director.

MARY ELIZABETH AVERY,
Instructor in Sewing.

THOMAS HENRY CRAWFORD, A. M.,
Business Department.

HELEN LUCILE HOLGATE, B. H. E.,
Stenography and Typewriting.

OTHER OFFICERS.

THOMAS HENRY CRAWFORD, A. M.,
Clerk and Purchasing Agent.

ARTHUR JOHN STIMPSON, B. M. E.,
Librarian.

GEORGE BRELSFORD KEADY,
Printer.

HELEN LUCILE HOLGATE, B. H. E.,
Stenographer.

WILLIAM THOMAS JOHNSON, B. S. A.,
Assistant Florist and Gardener.

WALTER GEORGE KEADY,
Assistant Printer.

ORVILLE BEECHER CONNER,
Foreman of the Farm.

JOHN ANDERSON SPANGLER,
Engineer.

ELLSWORTH ERWIN,
Janitor.

FACULTY COMMITTEES.

ACCREDITED SCHOOLS.—Pernot, Covell, McLouth.

ADVANCED STANDING.—Knisely, Kent, McElfresh, Phillips.

ADVISORY COMMITTEE.—Covell, Chamberlin, Berchtold, Withycombe.

ATHLETICS.—Fulton, Patterson, Hayward, McElfresh.

DISCIPLINE.—Skelton, Horner, Chamberlin.

EMPLOYMENT.—Coote, Withycombe, Knisely, Edwards.

ENTRANCE EXAMINATIONS.—Dean Chamberlin, Skelton, Horner, Johnson, Callahan.

GRADUATES.—Dean Berchtold, Kent, Phillips.

LECTURES AND LITERARY ENTERTAINMENTS.—Professors Crawford, Edwards, Horner.

LEGISLATION.—Withycombe, McLouth, Covell.

LIBRARY.—Callahan, Withycombe, Holgate, Horner.

LITERARY SOCIETIES.—Snell, Patterson, McKellips, Pernot.

MASTER'S DEGREE.—Lake, Skelton, Cordley.

MUSIC.—Instructor Crawford, Chamberlin, Fulton, Prichard.

PUBLICATIONS.—Horner, Berchtold, Lake, Cordley.

SOCIAL ENTERTAINMENTS.—Cordley, Chamberlin, Kent, Johnson.

THE STATION STAFF.

THOMAS MILTON GATCH, M. A., PH. D.,
Director.

JAMES WITHYCOMBE, M. AGR.,
Vice-Director and Agriculturist.

ARTHUR BURTON CORDLEY, M. S.,
Entomologist.

EDWARD RALPH LAKE, M. S.,
Botanist and Horticulturist.

GEORGE COOTE,
Florist and Gardener.

ABRAHAM LINCOLN KNISELY, M. S.,
Chemist.

JOHN FULTON, B. S.,
Assistant Chemist.

CLARENCE MELVILLE McKELLIPS, PH. C.,
Assistant Chemist.

FRED LEROY KENT, B. S. AGR.,
Assistant Agriculturist and Dairy Instructor.

EMILE FRANCIS PERNOT,
Bacteriologist.

THOMAS HENRY CRAWFORD, A. M.,
Clerk and Purchasing Agent.

HELEN LUCILE HOLGATE, B. H. E.,
Stenographer.

Oregon Agricultural College.

HISTORY.

By an act approved by President Lincoln, July 2, 1862, a grant of land was made by the United States to each state in the Union in the amount of thirty thousand acres, or its equivalent, for each Senator and Representative to which the state was entitled by the apportionment of the census of 1860.

The proceeds under this act were to constitute a perpetual fund the principal of which was to remain forever undiminished; but interest arising from said fund in each state, which should avail itself of the benefits of the act, was to be applied inviolably to the support and maintenance of a "College where the leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Ninety thousand acres of land were apportioned to Oregon, and by an Act approved October 9, 1862, the Legislative Assembly of Oregon accepted the provisions of the congressional law.

In 1868 the legislature appointed three commissioners to locate the land, which was done and the report submitted in 1870.

There were in 1868 no state colleges in Oregon, and the same legislature that provided for the location of the land gave the use of the funds that should arise from the sale of the land to the Corvallis College, in Benton county, an institution of learning under the control of the M. E. Church, South.

None of the land of the land grant having as yet been sold, the legislature made an annual appropriation to support the school until the fund to be derived from the grant should become sufficiently large for that purpose. The amount appropriated, while not large, accomplished the purpose: It kept "the feeble spark from expiring."

In 1885 the church voluntarily relinquished its claim on the funds of the Agricultural College, and the state resumed control vesting the general control of the college in a board of regents, granting full power to that end.

In the summer of 1887 the corner-stone of a brick structure was laid by the Governor of Oregon amid imposing ceremonies. This structure, the new Agricultural College, erected by citizens of Benton county on the Agricultural College farm, was the nucleus around which other buildings soon began to cluster as necessity and growing interests demanded.

For a year or two there was ample room; but like a healthy plant placed in good soil, the institution expanded, until the original thirty-five acres have increased to nearly two hundred, and the first structure now proudly surveys its eight descendants.

THE MORRILL ACT.

On August 30, 1890, "An Act" was passed by Congress "to apply a portion of the proceeds of the public lands to

the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July 2, 1862.

This act provided that in 1890, \$15,000 should be paid to these land grant colleges and that the amount so appropriated should be increased by the sum of \$1,000 annually for ten years, and that thereafter the amount annually appropriated should continue to be \$25,000.

It is provided in this act that this money shall be "applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic sciences with special reference to their application in the industries of life, and to the facilities for such instruction." But it is provided that "no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings."

THE HATCH ACT.

In addition to the above, this college receives from the United States, under the "Hatch Bill" of 1887, the sum of \$15,000 a year for experimenting in agriculture. With this sum it supports an agricultural experiment station in connection with the college. As this "Hatch Fund" is used entirely for experiment work, it adds nothing to the income available for educational purposes. But the experiment station is valuable to students in agriculture in giving them practical illustration in many agricultural and horticultural processes.

LOCATION.

The State Agricultural College is located at Corvallis, Oregon, near the head of navigation on the Willamette river. The city, as its name indicates, is in the heart of this beautiful valley. To the east, on the distant horizon, may be seen the Cascades, with their snow-capped peaks, while to the west, and near at hand, is the Coast range. Mary's Peak, the tallest in the range, for several months of the year is covered with snow, and, though twenty miles away, adds beauty to the scene.

Corvallis is located on high ground, is healthful, and has not been visited by any dangerous, epidemic diseases. It is accessible by rail from the east, west, north and south.

The postoffice address is Corvallis, Benton Co., Oregon. The Pacific Postal and Western Union Telegraph Companies, and Wells, Fargo & Co's Express have offices in Corvallis.

BUILDINGS AND GROUNDS.

CAMPUS AND FARM.

The college grounds comprise 198.91 acres. Of this a tract of 35 acres in the immediate vicinity of the administration buildings constitutes the campus. This is tastefully laid out and adorned with trees, shrubbery, flower gardens, walks, and drives, and it is intended to have all of the native trees and shrubbery of the state represented on these grounds. On the campus are the grounds for military drill, base ball, foot ball, lawn tennis, bicycle track and general athletics. The college farm consists of about one hundred and fifty-five acres, and is to the west of the administration building. The farm is provided with barns, silos, piggery,

tool house, implements and stock, sufficient for the purpose of practical instruction in agriculture. One hundred acres of the farm are devoted to a variety of farm crops, grass plats, orchards, berry and vegetable plats, illustrative of the studies and experiments in agriculture and horticulture.

ADMINISTRATION BUILDING.

The administration building stands on a pleasant elevation to the west of Corvallis, and is a large substantial brick structure. This building contains many class rooms, chemical, pharmaceutical and zoological laboratories, library, chapel, museum, and the offices of the President, Dean, and Clerk of the College.

CHEMISTRY BUILDING.

This very neat building is located to the south of, and quite near, the administration building, and contains the station chemical laboratory, students' laboratory, and the office of the station and college chemist. The equipment of the department of chemistry is one of the most complete on the coast.

GYMNASIUM AND ARMORY.

South of the chemical building may be seen the very substantial structure of the gymnasium and armory, a building 70 x 120 feet, built of wood and stone. The main hall is used for commencement purposes. The basement, 12 feet high in the clear, contains the bowling alleys, physical culture rooms for men and women, commandant's quarters, etc.

The gymnasium, which is 20 feet to the under side of the trusses, has an unobstructed floor area of 8000 square feet. It is encircled by a suspended gallery six feet wide. A stage, with dressing rooms for men and women, occupies the east end of the main hall.

During the winter months this spacious building serves as a drill hall for the cadets, and the classes in physical culture.

HORTICULTURAL BUILDING.

This building stands north of the administration building, and contains a class room and laboratory for the department of floriculture, and the office and laboratory of the bacteriologist of the station.

Adjoining this building are the spacious greenhouses which contain an extensive and typical collection of florist's plants.

POWER HOUSE.

To the west of the administration building is located the power house, a roomy, one story brick structure containing, in the north wing, one forty-five horse power engine with two electric generators of two hundred light capacity each, which furnish light for all the principal buildings, including the armory and the dormitories, as well as power for mechanical hall. The south wing, with cement floor, is all one large blacksmith shop containing twenty forges for the use of students taking the mechanical and agricultural courses.

MECHANICAL HALL.

One of the most substantial, as well as elegant, structures on the campus is mechanical hall, recently finished. With

its solid stone walls and galvanized iron roof it is a fine example of modern architecture.

On the first floor are found the machine shops, the printing office, the physical laboratory and various recitation rooms and the office of the professor of mechanical engineering; while the rooms in the upper story are occupied by the departments of botany and horticulture, mathematics and civil engineering, and the classes in wood-working, mechanical and freehand drawing.

DAIRY BUILDING.

The Dairy building is located west of Alpha hall, and contains a complete system of apparatus for giving practical instruction in its line of work. It also contains the office of the dairy instructor.

CAUTHORN HALL.

This is a large and comfortable building, four stories high, well provided with water, steam heat, and electric lights.

The dining room, kitchen, and club rooms of this building are commodious, pleasant, and well furnished. There is room sufficient to accommodate about one hundred students.

ALPHA HALL.

This is a cheerful and delightful home for the young women students. It is two stories high and contains rooms for thirty young ladies, besides pleasant reception and music rooms and a commodious dining hall. It is lighted by electricity and provided with excellent water.

THE HEATING PLANT.

This very important part of the college equipment was completed in October, 1899, and has proved to be far more efficient than the stoves, the hot air and hot water systems which had before been used in supplying the various buildings with heat. The plant has all the latest and best steam-heating appliances and has a capacity sufficient to keep the recitation rooms at a summer temperature on the coldest days. The building, with a base 33 feet square and a height of 15 feet, is made of brick and stone, and has a brick chimney 65 feet in height. The steam is furnished by a battery of two steel boilers, seventy-five horse power each, which is connected with the buildings by double lines of steam pipes running through under-ground brick conduits.

All of the rooms in the administration and chemical buildings, the mechanical hall, the horticultural building and the greenhouses are supplied with heat from this plant, and it is probable that Alpha hall and the Armory will be supplied from the same source as soon as the resources of the institution will admit.

STUDENT LIFE.

CAUTHORN HALL CLUB.

Cauthorn hall club is under the management of Professor and Mrs. Horner. During the coming year, this club will be conducted on the co-operative plan. A nominal fee will be charged for rent and electric lights. The expense of living at the club therefore will be but little more than the actual outlay for help, wood, groceries, vegetables, etc. The maximum cost is not to exceed \$2.50 per week.

To become a member of Cauthorn hall club it will be

necessary for the applicant to give satisfactory evidence of his ability to govern himself. To join the club prior to January 1, he will be required to pay in advance a fee of ten dollars; to join after January 1 and before April 1, eight dollars; to join later than April 1, five dollars. This fee will be set aside for wood, rent, lights and repairs to rooms, and the portion of the fee unexpended for this purpose will be returned to the student at the close of the year or at the expiration of his membership. It will also be necessary for him to pay upon entrance and on or before the first day of each succeeding month during his membership with the club ten dollars to be used in defraying other necessary expenses. At the close of each month the unexpended balance of this fund will be applied to the reduction of such fund to be paid for the succeeding month.

Each room of the hall is furnished with a table, chairs, a chest with drawers, a bedstead, springs, mattress, pillow and mirror. Hence the student is expected to furnish sheets, pillow cases, blankets, quilts, towels, broom, dustpan, washbowl and pitcher, comb, brushes, tumblers, carpet or matting, pictures and other things that will make his room comfortable and homelike. He should bring a dictionary and such other books as are used for study, for reference, and for profitable entertainment.

The hall is furnished with a reading room which is supplied by the club with some choice current literature.

For further information send for special circular.

ALPHA HALL.

Alpha or young ladies' hall will be continued the coming year under the management of Miss Snell, the immediate charge being delegated to a competent assistant.

A circular, stating price of board and containing detailed information regarding all necessary matter, will be issued early in July of this year and may be had on application to the college clerk.

The hall is healthfully located, lighted by electricity, and supplied with excellent water. A tennis court and facilities for other games render the hall grounds most attractive.

Applicants for rooms must present satisfactory certificates of good character.

There will be a charge of \$4.00 per month for room, light, heat and service, and board in the hall may be had for \$8.00.

SOCIAL LIFE OF THE STUDENTS.

The social life of students is not neglected. The college has six active literary societies which meet every week. Once a term each society gives a social attended by some member of the faculty. Literary contests are common events, the societies meeting in joint session, with prominent citizens as judges. The Y. M. C. A. and Y. W. C. A. hold their regular sessions at the college every Sunday afternoon. These gatherings aid materially in developing the social and spiritual life of the members. Each year a popular course of lectures free to all students is given, under the direction of the faculty, by distinguished speakers from various parts of the state. At the chapel period the students meet with the faculty in song, prayer and scriptural reading, usually followed with orations by the seniors or with musical or rhetorical exercises by other students. Vocal and instrumental music intersperse various features of the college work, so that a student in a career of four years may not leave the institution without the refining influences of this important art. Physical culture is encouraged in every

way at the gymnasium and on the training grounds. Bowling, fencing, Indian-club swinging, dumb-bell exercises, foot ball, basket ball, base ball, and lawn tennis occupy the spare moments of the students in a happy commingling of all classes. These social affairs, although under the direction of a committee of the faculty, are managed by the students who thereby acquire a training in social life destined to be of great value to them.

Corvallis is pre-eminently a college town noted for social clubs, literary societies, and active churches which vie with each other in friendly interest and hospitality toward our young people. More and more as the institution progresses patrons of the college move hither that they may be with their children and at the same time enjoy the refining influences and cultured society of a college community.

SOCIETIES.

The students maintain several literary societies, four for young ladies and four for young gentlemen. These societies are of a semi-fraternal nature, offering to their members social as well as literary advantages. The exercises consist principally of essays, declamations, debates and music. Public and joint meetings are held by permission of the faculty. Many other features of college life, social and literary, are under their supervision. Students are elected to membership by those already belonging to the societies.

The following is a list of the different societies now in existence:

For young ladies: Sorosis, Pierian, Feronian, Utopian.

For young men: Amicitia, Jeffersonian, Philadelphian, Zetagathian.

The membership of each of these societies is limited to forty. They are all in a flourishing condition.

The students also maintain active branches of both the college Y. M. C. A. and Y. W. C. A.

In March, 1896, the literary societies of the college began the publication of a monthly periodical, the "College Barometer." The enterprise met with marked success, and the paper, controlled entirely by students, now wields a strong influence in all college affairs. During the coming year every effort will be made to improve it and make it of interest not only to those directly connected with the school, but to all who are in touch with literary, scientific and industrial education. The editors will be pleased to receive news of alumni and other persons formerly connected with the college. Brief, pointed notes, accounts of scientific experiments and discoveries, and short, well-written and instructive literary articles are also solicited.

ATHLETIC ASSOCIATION.

The students of the college maintain an athletic association which is governed by the following rules and regulations:

1. The athletic association of the college shall have immediate charge of, and be responsible for, the proper conduct of all athletic games of the college, under the supervision of the athletic committee of the faculty.

2. A candidate for any position on an athletic team, bearing the colors and name of the Oregon Agricultural College, shall be of good moral character, shall not fall below a passing grade in more than one study, and shall have matriculated during the first month of the college year, or at least three months before applying for membership on such team.

3. A committee on athletics, composed of five members of the faculty shall have general supervision over all athletics of the college.

4. All action of athletic clubs must be referred to this committee for its approval.

5. All trainers employed by the clubs of the college must be of good moral character, and must be approved by the athletic committee.

6. No inter-collegiate, or other, contests shall be entered into without consent of the athletic committee.

7. In all athletics provision must be made by the athletic association to meet all expenses, whether for general or special athletics, so that the college name will not be involved in any way with bad debts.

8. No student who is excused from industrial work, or military drill, on account of physical disability, shall be allowed to engage in college athletics.

GOVERNMENT.

The college does not undertake to prescribe in detail either its requirements or prohibitions. Students are met on a plane of mutual regard and helpfulness. Our appeal is to a proper sense of the proprieties of life and the necessity of organization on such a basis.

Established by a government that recognizes no distinction of religious belief, the Oregon Agricultural College seeks neither to promote any creed nor to exclude any; but it will always do everything in its power to promote the religious spirit and life.

Whenever the college life of any student is such that his influence, directly or indirectly, is injurious to the work of the institution, he will be relieved from further attendance at this college.

All absences will be charged from the first recitation of the term.

COURSE OF LECTURES.

In addition to the regular lectures given in the various departments by members of the faculty, a course of lectures by representative men, is delivered at convenient intervals during the year. These lectures bring young people in contact with the leaders in the various departments of human endeavor; arouse investigation on current topics; stimulate students to emulate the achievements of specialists; give

breadth of scholarship to the student and aid in developing the character of the institution. They rank among the most attractive features of college life and are free to all students.

CONDITIONS OF ADMISSION.

To enter the freshman year the applicant must be at least fifteen years of age, and must be able to pass a satisfactory examination in reading, spelling, geography, arithmetic (written and mental), United States history and English grammar.

Those applicants who have completed a high school course will be given proper credit for work accomplished, and all those who have finished a course in certain approved grammar schools, a list of which is given below, will be admitted to the freshman year on presentation of their diplomas.

SPECIAL STUDENTS.

Provision is made as follows to accommodate students who do not wish to enter the regular college courses:

Non-graduate, special students who may desire to attend regular classes in any department may do so on recommendation of the head of the department and the consent of the President.

Such special students must be at least eighteen years of age, and shall not be considered candidates for graduation.

Students will be admitted at any time to advanced classes on passing an examination upon the preceding subjects.

ADMISSION FROM OTHER COLLEGES.

Students from other colleges must show a certificate of good standing, or honorable dismissal. Such applicants

will receive credit for studies pursued in any college authorized to confer degrees, so far as the two courses are equivalent, upon presenting a certificate of standing from the proper officers.

ACCREDITED SCHOOLS.

Graduates from the following accredited schools will be admitted to the freshman year without examination:

Albany,	Hood River
Astoria,	Independence,
Ashland,	Jacksonville,
Athena,	Junction City,
Baker City,	Klamath Falls,
Bandon (Major Course),	La Grande,
Bishop Scott Academy,	La Creole Academy,
Corvallis,	Lafayette High School,
Cottage Grove,	Marshfield,
Coquille Collegiate Institute,	McMinnville,
Elgin,	Medford,
Enterprise Academy,	North Yamhill,
Eugene,	Oregon City,
Forest Grove,	Pendleton,
Garland Academy,	Portland,
Grant's Pass,	Park Place,
Harrisburg,	Salem,
Halsey,	Santiam Academy,
Hillsboro High School,	The Dalles,
Huntington,	Union,
Heppner,	Wasco.

The above list is subject to annual revision.

SCOPE OF THE INSTITUTION.

The scope of the institution, as now organized, cannot be better stated than in the comprehensive words of the act of Congress defining the duty of this and similar colleges:

“The leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislature of the state may prescribe, *in*

order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Based upon this broadened foundation, the special work of the Oregon Agricultural College is the training of youth in those branches of learning which lie at the foundation of modern industrial pursuits. In accordance with the purposes of its founders, and the terms of its original charter, it aims to give special and prominent attention to agriculture, both theoretical and experimental; but it also provides "a liberal and practical education" in the leading branches of mathematical, natural and physical sciences, in order to prepare youth "for the several pursuits and professions of life." It has increased its subjects and courses of study, and its teaching and illustrative equipment, to such an extent that now, "without excluding classical studies," its leading object is to teach the various sciences in such a manner as to show their applications in the more important industries, to combine with every branch of instruction such an amount of actual practice in the shop, the field, and the laboratory as will serve to illustrate and apply the theory, but without subordinating it. The course in agriculture, as now arranged, conforms very closely to the recommendations of the *Association of American Agricultural Colleges and Experiment Stations*. The range of work in the various courses is shown, as far as the limits of space will allow, in the following descriptive statements and schedule. It is confidently believed that few institutions in the country furnish opportunities for obtaining advanced scientific education to an equal extent and thoroughness at so moderate a cost and with so many incidental advantages.

DEGREES AND COURSES OF STUDY.

UNDERGRADUATE WORK.

The courses offered at the college are arranged under four general heads—Agriculture, Mechanical and Electrical Engineering, Household Science, and Pharmacy—all of which require training in English, mathematics, history, elocution, drawing and such other branches as are requisite to a practical education.

Graduation requires four years of college work; and all the courses of study lead to the degree of Bachelor of Science. In order that the college may meet the needs of a greater number of people and the students intensify along special lines, much of the work is made elective, as may be seen by reference to the courses of study published elsewhere in this catalogue.

In addition to the above courses provision has been made for a two-year Business course which, however, does not lead to any degree, but to a diploma or certificate only.

GRADUATE WORK.

That students may be encouraged to continue their college work after graduation, the board of regents has made provision for courses leading to advanced degrees.

ADVANCED DEGREES.

Advanced degrees will be given to graduates of this college, or similar, approved colleges, upon the following conditions:—

An applicant for a higher degree must present himself for examination in one major and at least one minor study.

Major and minor courses leading to the degree of Master of Science, to be selected from different departments, approved by the faculty, are provided for in the departments of Agriculture, Botany, Chemistry, Economics, Horticulture, Zoology, Mechanical and Electrical Engineering and Household Science. The minor, at the option of the student, may also be taken from the departments of Mathematics, History or Modern Languages. The candidate must prepare a thesis, based upon original research, which shall show scholarly acquirements of a high order. This thesis must be printed or typewritten and bound, and two copies of it left in the college library. The candidate must spend at least two academic years, or their equivalents, as a resident student at this college in preparing for this degree.

COURSE IN AGRICULTURE.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
* { Freehand Drawing 1½, 3.....	Drawing I.
* { Elocution 1, 2.....	Elocution I.
* Woodwork 2½, 5.....	Shopwork I.
Military Drill 2, 4.....	Military I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Composition 5.....	English II.
* General History 5.....	History II.
Elocution 1, 2.....	Elocution II.
Freehand Drawing 1½, 3.....	Drawing II.
Woodwork 2½, 5.....	Shopwork II.
Military Drill 1½, 3.....	Military II.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5.....	English III.
Plant Morphology 5, 7.....	Botany I.
Breeds of Stock 5.....	Agriculture I.
* Freehand Drawing 2½, 5.....	Drawing III.
Military Drill 2½, 5.....	Military III.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5.....	Mathematics IV.
Rhetoric 5.....	English IV.
* Plant Histology 5, 7.....	Botany II.
Dairying $2\frac{1}{2}$	Agriculture II.
Drainage $2\frac{1}{2}$	Agriculture III.
Blacksmithing $1\frac{1}{2}$, 3.....	Shopwork IV.
Military Drill 2, 4.....	Military IV.

SECOND TERM.

Geometry 5.....	Mathematics V.
Chemistry 5, 7.....	Chemistry I.
Rhetoric 4.....	English V.
* Soils and Manures 5.....	Agriculture IV.
Blacksmithing $2\frac{1}{2}$, 5.....	Shopwork V.
Military Drill $1\frac{1}{2}$, 3.....	Military V.

THIRD TERM.

* Trigonometry 5.....	Mathematics VI.
Chemistry 5, 7.....	Chemistry II.
English Literature 5.....	English VI.
Zoology 5, 7.....	Zoology I.
Military Drill $2\frac{1}{2}$, 5.....	Military VI.

JUNIOR YEAR.

FIRST TERM.

Plant Physiology 5, 7.....	Botany III.
*Entomology 5, 7.....	Zoology II.
Qualitative Analysis 5, 7.....	Chemistry III and XI.
Dairying 5.....	Agriculture V.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military VII.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military VIII.

SECOND TERM.

*Literature 5.....	English VII.
Physics 5, 7.....	Physics I.
Vertebrate Anatomy 5, 7.....	Zoology III.
Agricultural Chemistry 5.....	Chemistry IV.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military IX.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military X.

THIRD TERM.

*Surveying 5, 7.....	Mathematics X.
Physics 5, 7.....	Physics II.
Civics 5.....	Political Science II.
Physiology 5, 7.....	Zoology IV.
Steam Engine 1, 2.....	Mechanics IV.
Military $2\frac{1}{2}$, 5.....	Military XI.

SENIOR YEAR.

FIRST TERM.

Economics 5.....	Political Science I.
Veterinary Science 5, or,	Agriculture VII.
Horticulture 5.....	Horticulture I.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XIII.

†*Electives.*

German 5, or,	German X.
Latin 5.....	Latin X.
Chemistry 5, 7.....	Chemistry V.
Mineralogy 5, 7	Chemistry VI.
Botany 5, 7.....	Botany IV.
Zoology 5, 7	Zoology VI.
Bacteriology 5, 7.....	Bacteriology I.

SECOND TERM.

Psychology 5.....	Mental Science I.
Veterinary Science 5, or,	Agriculture VIII.
Horticulture 5.....	Horticulture II.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XIV.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XV.

†*Electives.*

German 5, or,	German XI.
Latin 5	Latin XI.
Botany 5, 7	Botany V.
Chemistry 5, 7.....	Chemistry VII.
Zoology 5, 7	Zoology VII.
Bacteriology 5, 7	Bacteriology II.

Assaying 5, 7.....	Chemistry VIII.
Elocution 1, 2.....	Elocution V.

THIRD TERM.

Veterinary Science 5, or,.....	Agriculture IX.
Horticulture 5.....	Horticulture III.
Stock Feeding and Breeding 4.....	Agriculture VI.

†*Electives.*

Military Drill 2½, 5.....	Military XVI.
American Literature 5.....	English VIII.
German 5, or,.....	German XII.
Latin 5.....	Latin XII.
Astronomy 5.....	Mathematics XI.
Agricultural Engineering 5.....	Mathematics XII.
Botany 5, 7.....	Botany VI or VII.
Zoology 5, 7.....	Zoology VIII.
Geology 5.....	Geology I.
Chemistry 5, 7.....	Chemistry IX.
Bacteriology 5, 7.....	Bacteriology III.
Assaying 5, 7.....	Chemistry X.

*Latin or German may be elected instead, but no credit will be given towards graduation for less than the full course of six terms.

†In addition to the required studies seniors must select from the electives a sufficient number of hours to form a full course, viz: 22 hours.

COURSE IN HOUSEHOLD SCIENCE.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
* { Freehand Drawing 1½, 3.....	Drawing I.
{ Elocution 1, 2.....	Elocution I.
General Hygiene ½, 1.....	Household Science I.
Sewing 2, 4.....	Household Science II.
Physical Culture 1½, 3.....	Physical Culture I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Composition 5.....	English II.
* General History 5.....	History II.
Elocution 1, 2.....	Elocution II.
Freehand Drawing 1½, 3.....	Drawing II.
Etiquette ½, 1.....	Household Science III
Sewing 2, 4.....	Household Science IV.
Physical Culture 1½, 3.....	Physical Culture II.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5.....	English III.
Plant Morphology 5, 7.....	Botany I.
* Freehand Drawing 2½, 5.....	Drawing III.
Sewing 2½, 5.....	Household Science V.
Physical Culture 1½, 3.....	Physical Culture III.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5.....	Mathematics IV.
* Plant Histology 5, 7.....	Botany II.
Rhetoric 5.....	English IV.
Dressmaking 2½, 5.....	Household Science VI.
Elocution 1, 2.....	Elocution III.
Physical Culture 1½, 3.....	Physical Culture IV.

SECOND TERM.

Geometry 5.....	Mathematics V.
History of Eastern Peoples 5.....	History III.
Chemistry 5, 7.....	Chemistry I.
Rhetoric 4.....	English V.
Dressmaking 2½, 5.....	Household Science VII.
Physical Culture 1, 2.....	Physical Culture V.

THIRD TERM.

English Literature 5.....	English VI.
Zoology 5, 7.....	Zoology I.
Chemistry 5, 7.....	Chemistry II.
Modern History 5.....	History IV.
* Dressmaking 2½, 5.....	Household Science VIII.

JUNIOR YEAR.

FIRST TERM.

Plant Physiology 5, 7.....	Botany III.
Entomology 5, 7.....	Zoology II.
Chemistry 5, 7.....	Chemistry III and XI.
German 5, or.....	German VII.
Latin 5.....	Latin VII.
Cookery 2½, 3.....	Household Science IX.

SECOND TERM.

Literature 5.....	English VII.
Floriculture 5.....	Floriculture I.
German 5, or.....	German VIII.
Latin 5.....	Latin VIII.
Vertebrate Anatomy 5, 7.....	Zoology III.
Cookery 1½, 3.....	Household Science X.
Physical Culture 1½, 3.....	Physical Culture VI.

THIRD TERM.

Dairying 5, or.....	Agriculture V.
American Literature 5.....	English VIII.
German 5, or.....	German IX.
Latin 5.....	Latin IX.
Physiology 5, 7.....	Zoology IV.
Civics 5.....	Political Science II.
Cookery 3.....	Household Science XI

SENIOR YEAR.

FIRST TERM.

Economics 5.....	Political Science I.
Aesthetics 5.....	Household Science XII.
German 5, or,.....	German X.
Latin 5.....	Latin X.

†*Electives.*

Botany 5, 7.....	Botany IV.
Zoology 5, 7.....	Zoology V.
Chemistry of Foods 5, 7.....	Chemistry XII.
Bacteriology 5, 7.....	Bacteriology I.
Elocution 1, 2.....	Elocution IV.
Drawing 2½, 5.....	Drawing IV.

SECOND TERM.

Psychology 5.....	Mental Science I.
German 5 or.....	German XI.
Latin 5.....	Latin XI.
Aesthetics 5.....	Household Science XIII.

†*Electives.*

Physics 5, 7.....	Physics I.
Chemistry of Foods 5, 7.....	Chemistry XIII.
Zoology 5, 7.....	Zoology VI.
Botany 5, 7.....	Botany V.
Elocution 1, 2.....	Elocution V.
Drawing 2½ 5.....	Drawing V.
Bacteriology 5, 7.....	Bacteriology II.

THIRD TERM.

Domestic Lectures 5.....	Household Science XIV.
German 5, or,.....	German XII.
Latin 5.....	Latin XII.

† *Electives.*

Physics 5, 7.....	Physics II.
Geology 5.....	Geology I.
Chemistry of Foods 5, 7.....	Chemistry XIV.
Zoology 5, 7.....	Zoology VII.
Botany 5, 7.....	Botany VI.
Elocution 1, 2.....	Elocution VI.
Drawing 2½, 5.....	Drawing VI.
Astronomy 5.....	Mathematics XI.
Bacteriology 5, 7.....	Bacteriology III.
Landscape Gardening 5.....	Horticulture III.

*Latin or German may be elected instead, but no credit will be given towards graduation for less than the full course of six terms.

† In addition to the regular studies seniors must select from the electives enough hours to form a full course, viz: 22 hours.

COURSE IN MECHANICAL ENGINEERING

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
* { Freehand Drawing 1½, 3.....	Drawing I.
* { Elocution 1, 2.....	Elocution I.
Woodwork 2½, 5.....	Shopwork I.
Military Drill 2, 4.....	Military I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Composition 5.....	English II.
*General History 5.....	History II.
Elocution 1, 2.....	Elocution II.
Freehand Drawing 1½, 3.....	Drawing II.
Woodwork 2½, 5.....	Shopwork II.
Military Drill 1½, 3.....	Military II.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5.....	English III.
Modern History 5.....	History IV.
*Freehand Drawing 2½, 5.....	Drawing III.
Woodwork 2½, 5.....	Shopwork III.
Military Drill 2½, 5.....	Military III.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5	Mathematics IV.
Rhetoric 5	English IV.
Mechanical Drawing 5, 10.....	Mechanical Engineering I.
*Blacksmithing $2\frac{1}{2}$, 5.....	Shopwork IV.
Military Drill 2, 4.....	Military IV.

SECOND TERM.

Geometry 5	Mathematics V.
Chemistry 5, 7.....	Chemistry I.
Rhetoric 4.....	English V.
*Mechanical Drawing $2\frac{1}{2}$, 5.....	Mechanical Engineering II.
Blacksmithing $2\frac{1}{2}$, 5.....	Shopwork V.
Military Drill $1\frac{1}{2}$, 3	Military V.

THIRD TERM.

Trigonometry 5.....	Mathematics VI.
Chemistry 5, 7.....	Chemistry II.
English Literature 5.....	English VI.
Mechanical Drawing $1\frac{1}{2}$, 3.....	Mechanical Engineering III.
Blacksmithing $2\frac{1}{2}$, 5.....	Shopwork VI.
*Military Drill $2\frac{1}{2}$, 5.....	Military VI.

½ JUNIOR YEAR—MECHANICAL.

FIRST TERM.

*Literature 5	English VII.
Mechanism 5	Mechanical Engineering IV.
Analytical Geometry 5	Mathematics VII.
Descriptive Geometry 5	Mechanical Engineering V.
Machine Shop 2½, 5	Shopwork VII.
Military Drill $\frac{3}{4}$, 1½	Military VII.
Military Science $\frac{3}{4}$, 1½	Military VIII.

SECOND TERM.

Physiology 5	Zoology V.
Physics 5, 7	Physics I.
*Descriptive Geometry 3	Mechanical Engineering VI.
Calculus 5	Mathematics VIII.
Machine Shop 2½, 5	Shopwork VIII.
Military Drill $\frac{3}{4}$, 1½	Military IX.
Military Science $\frac{3}{4}$, 1½	Military X.

THIRD TERM.

Calculus 5	Mathematics IX.
Physics 5, 7	Physics II.
Steam Engines and Boilers 4	Mechanical Engineering VII.
Civics 5	Political Science II.
*Machine Shop 2, 4	Shopwork IX.
Military Drill 2½, 5	Military XI.

½ Students wishing to specialize in electrical engineering may elect to do so at the beginning of the junior year.

*Latin or German may be elected instead, but no credit will be given towards graduation for less than the full course of six terms.

SENIOR YEAR—MECHANICAL.

FIRST TERM.

Economics 5	Political Science I.
Mechanics of Engineering 5	Mechanical Engineering VIII.
Thermodynamics 3	Mechanical Engineering IX.
Physics 5, 7	Physics III.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XIII.

†*Electives.*

German 5, or,	German X.
Latin 5	Latin X.
Woodwork $2\frac{1}{2}$, 5	Shopwork X.
Ironwork $2\frac{1}{2}$, 5	Shopwork XI.
Mechanical Drawing $2\frac{1}{2}$, 5	Mechanical Engineering X.
Mineralogy 5, 7	Chemistry VI.

SECOND TERM.

Psychology 5	Mental Science I.
Machine Design 3	Mechanical Engineering XI.
Mechanics of Engineering 5	Mechanical Engineering XII.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XIV.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XV.

†*Electives.*

German 5, or,	German XI.
Latin 5	Latin XI.
Woodwork $2\frac{1}{2}$, 5	Shopwork XII.
Ironwork $2\frac{1}{2}$, 5	Shopwork XIII.
Mechanical Drawing $2\frac{1}{2}$, 5	Mechanical Engineering XIII.
Assaying 5, 7	Chemistry VIII.
Elocution 1, 2	Elocution V.

THIRD TERM.

Mechanics of Engineering 5 . . Mechanical Engineering XIV.
 Machine Design 5 Mechanical Engineering XV.

† *Electives.*

German 5, or, German XII.
 Latin 5 Latin XII.
 Astronomy 5 Mathematics XI.
 American Literature 5 English VIII.
 Surveying 5, 7 Mathematics X.
 Woodwork $2\frac{1}{2}$, 5 Shopwork XIV.
 Ironwork $2\frac{1}{2}$, 5 Shopwork XV.
 Mechanical Drawing $2\frac{1}{2}$, 5 . . . Mechanical Engineering XVI.
 Assaying 5, 7 Chemistry X.
 Military Drill $2\frac{1}{2}$, 5 Military XVI.

† In addition to the regular studies seniors must select from the electives enough hours to form a full course, viz: 22 hours.

JUNIOR YEAR—ELECTRICAL.

FIRST TERM.

Descriptive Geometry 5.....	Mechanical Engineering V.
Mechanism 5.....	Mechanical Engineering IV.
Analytical Geometry 5.....	Mathematics VII.
Physics 5.....	Electrical Engineering I.
* Machine Shop $2\frac{1}{2}$, 5	Shopwork VII.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military VII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military VIII.

SECOND TERM.

Electricity and Magnetism 5, 7..	Electrical Engineering II.
* Literature 5	English VII.
Descriptive Geometry 3.....	Mechanical Engineering VI.
Calculus 5.....	Mathematics VIII.
Machine Shop $2\frac{1}{2}$, 5.....	Shopwork VIII.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military IX.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military X.

THIRD TERM.

Calculus 5	Mathematics IX.
Electricity and Magnetism 5, 7.	Electrical Engineering III.
Steam Engines and Boilers 4.	Mechanical Engineering VII.
* Civics 5.....	Political Science II.
Machine Shop 2, 4.....	Shopwork IX.
Military Drill $2\frac{1}{2}$, 5	Military XI.

SENIOR YEAR—ELECTRICAL.

FIRST TERM.

Economics 5	Political Science I.
Mechanics of Engineering 5	Mechanical Engineering VIII.
Alternating Currents and Dynamo Design 5, 7	} Electrical Engineering IV.
Physics 5, 7	
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XIII.

SECOND TERM.

Psychology 5	Mental Science I.
Machine Design 3	Mechanical Engineering XI.
Mechanics of Engineering 5	Mechanical Engineering XII.
Alternating Currents and Dynamo Design 5, 7	} Electrical Engineering V.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XIV.
	Military XV.

† *Electives.*

German 5, or,	German XI.
Latin 5	Latin XI.
Woodwork $2\frac{1}{2}$, 5	Shopwork XII.
Ironwork $2\frac{1}{2}$, 5	Shopwork XIII.
Mechanical Drawing $2\frac{1}{2}$, 5	Mechanical Engineering XIII.
Assaying 5, 7	Chemistry VIII.
Elocution 1, 2	Elocution V.

THIRD TERM.

Mechanics of Engineering 5	Mechanical Engineering XIV.
Machine Design 5	Mechanical Engineering XV.
Alternating Currents and Dynamo Design 5, 7	Electrical Engineering VI.

† *Electives.*

German 5, or,	German XII.
Latin 5	Latin XII.
Astronomy 5	Mathematics XI.
American Literature, 5	English VIII.
Surveying 5, 7	Mathematics X.
Woodwork 2½, 5	Shopwork XIV.
Ironwork 2½, 5	Shopwork XV.
Mechanical Drawing 2½, 5	Mechanical Engineering XVI.
Assaying 5, 7	Chemistry X.
Military Drill 2½, 5	Military XVI.

† In addition to the regular studies seniors must select from the electives enough hours to form a full course, viz: 22 hours.

COURSE IN PHARMACY.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
Latin 5.....	Latin I.
Freehand Drawing 1½, 3.....	Drawing I.
Elocution 1, 2.....	Elocution I.
† Military Drill 2, 4.....	Military I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Composition 5.....	English II.
Latin 5.....	Latin II.
General History 5.....	History II.
Freehand Drawing 1½, 3.....	Drawing II.
Elocution 1, 2.....	Elocution II.
Military Drill 1½, 3.....	Military II.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5.....	English III.
Latin 5.....	Latin III.
Plant Morphology 5, 7.....	Botany I.
Military Drill 2½, 5.....	Military III.

† Throughout the course young ladies take Physical Culture instead.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5.....	Mathematics IV.
Rhetoric 5.....	English IV.
German 5.....	German I.
Plant Histology 5, 7.....	Botany II.
Military Drill 2, 4.....	Military IV.

SECOND TERM.

Geometry 5.....	Mathematics V.
Rhetoric 4.....	English V.
German 5.....	German II.
Vertebrate Anatomy 5, 7.....	Zoology III.
Chemistry 5, 7.....	Chemistry I.
Military Drill 1½, 3.....	Military V.

THIRD TERM.

German 5.....	German III.
Zoology 5, 7.....	Zoology I.
Plant Classification 5, 7.....	Botany VII.
Chemistry 5, 7.....	Chemistry II.
Modern History 5.....	History IV.
Military Drill 2½, 5.....	Military VI.

JUNIOR YEAR.

FIRST TERM.

Literature 5	English VII.
Medical Chemistry and Qualitative Analysis 5, 7	Chemistry XIV and XIII.
Therapeutics and Doses 2	Pharmacy V.
Pharmacy 2	Pharmacy II.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military VII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military VIII.
Nomenclature 1	Pharmacy VI.
German 5	German IV.

SECOND TERM.

Medical Chemistry and Qualitative Analysis 5, 8	Chemistry XIV and XIII.
Pharmacognosy 2	Pharmacy III.
Pharmacy 3	Pharmacy IV.
Physics 5, 7	Physics I.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military IX.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military X.
German 5	German V.

THIRD TERM.

Medical Chemistry 5	Chemistry XIV.
Physiology 5, 7	Zoology IV.
Physics 5, 7	Physics II.
Civics 5	Political Science II.
Military Drill $2\frac{1}{2}$ 5	Military XI.
Pharmacognosy 2	Pharmacy I.
Pharmacy 3, 5	Pharmacy VII.

SENIOR YEAR.

FIRST TERM.

Materia Medica and Therapeutics 3.....	Pharmacy VIII.
Operative Pharmacy 4, 6.....	Pharmacy IX.
Quantitative Analysis 5, 7.....	Chemistry V.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XIII.
Bacteriology 5, 7.....	Bacteriology I.

SECOND TERM.

Materia Medica and Therapeutics 3.....	Pharmacy VIII.
Prescription Practice $3\frac{1}{2}$, 6.....	Pharmacy X.
Pharmaceutical Analysis 5, 10.....	Chemistry XV.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XIV.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XV.
Bacteriology 5, 7.....	Bacteriology II.

THIRD TERM.

Pharmacognosy and Synonyms 3.....	Pharmacy XI.
Prescription Practice $3\frac{1}{2}$, 6.....	Pharmacy X.
Toxicology 1.....	Pharmacy XIII.
Pharmaceutical Analysis 5, 10.....	Chemistry XV.
*Military Drill $2\frac{1}{2}$, 5.....	Military XVI.
Bacteriology 5, 7.....	Bacteriology III.

* Elective.

COURSE IN MINING.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Grammar 5.....	English I.
General History 5.....	History I.
Freehand Drawing 1½, 3.....	Drawing I.
Elocution 1, 2.....	Elocution I.
Woodwork 2½, 5.....	Shopwork I.
Military Drill 2, 4.....	Military I.

SECOND TERM

Algebra 5.....	Mathematics II.
Composition 5.....	English II.
General History 5.....	History II.
Freehand Drawing 1½, 3.....	Drawing II.
Elocution 1, 2.....	Elocution II.
Woodwork 2½, 5.....	Shopwork II.
Military Drill 1½, 3.....	Military II.

THIRD TERM.

Algebra 5.....	Mathematics III.
Composition 5.....	English III.
Modern History 5.....	History III.
Freehand Drawing 2½, 5.....	Drawing III.
Physical Geography 5.....	Physical Geography I
Military Drill 2½, 5.....	Military III.

SOPHOMORE YEAR.

FIRST TERM.

Geometry 5	Mathematics IV.
Rhetoric 5	English IV.
Mechanical Drawing 5, 10	Mechanical Engineering I.
Blacksmithing $2\frac{1}{2}$, 5	Shopwork IV.
Military Drill 2, 4	Military IV.

SECOND TERM.

Geometry 5	Mathematics V.
Chemistry 5, 7	Chemistry I.
Rhetoric 4	English V.
Mechanical Drawing $2\frac{1}{2}$, 5	Mechanical Engineering II.
Blacksmithing $2\frac{1}{2}$, 5	Shopwork V.
Military Drill $1\frac{1}{2}$, 3	Military V.

THIRD TERM.

Trigonometry 5	Mathematics VI.
Chemistry 5, 7	Chemistry II.
Surveying 5, 7	Mathematics X.
Mechanical Drawing $1\frac{1}{2}$, 3	Mechanical Engineering III.
Tool Dressing $2\frac{1}{2}$, 5	Shopwork VI.
Military Drill $2\frac{1}{2}$, 5	Military VI.

JUNIOR YEAR.

FIRST TERM.

Mine Surveying 3.....	Mathematics XIII.
Mechanism 5.....	Mechanical Engineering IV.
Analytical Geometry 5.....	Mathematics VII.
Descriptive Geometry 5.....	Mechanical Engineering V.
Qualitative Analysis 5.....	Chemistry III.
Machine Shop $1\frac{1}{2}$, $2\frac{1}{2}$	Shopwork VII.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military VII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military VIII.

SECOND TERM.

Tunneling, leveling, etc., 5.....	Mathematics XIV.
Physics 5, 7.....	Physics I.
Descriptive Geometry 3.....	Mechanical Engineering VI.
Calculus 5.....	Mathematics VIII.
Machine Shop $2\frac{1}{2}$, 5.....	Shopwork VIII.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military IX.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military X.

THIRD TERM.

Calculus 5.....	Mathematics IX.
Physics 5, 7.....	Physics II.
Steam Engines and Boilers 4.....	Mech. Engineering VII.
Civics 5.....	Political Science II.
Geology 5.....	Geology I.
Military Drill $2\frac{1}{2}$, 5.....	Military XI.

SENIOR YEAR.

FIRST TERM.

Mineralogy 5, 7.....	Chemistry VI.
Mechanics of Engineering 5.	Mechanical Engineering VIII.
Thermodynamics 3.....	Mechanical Engineering IX.
Physics 5, 7.....	Physics III.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XII.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XIII.

SECOND TERM.

Metallurgy and Ore Dressing 5, 7.....	Chemistry XXI.
Assaying 4, 6.....	Chemistry VIII.
Psychology 5.....	Mental Science I.
Mechanics of Engineering 5.	Mechanical Engineering XII.
Military Drill $\frac{3}{4}$, $1\frac{1}{2}$	Military XIV.
Military Science $\frac{3}{4}$, $1\frac{1}{2}$	Military XV.

THIRD TERM.

Mining Engineering 5.....	Mathematics XV.
Mining Hydraulics } and Ventilation 5 }	Mechanical Engineering XVII.
Assaying 5, 7.....	Chemistry X.
Mechanics of Engineering 5.	Mechanical Engineering XIV.
Machine Design 5.....	Mechanical Engineering XV.
Military Drill $2\frac{1}{2}$, 5.....	Military XVI.

SPECIAL COURSE IN MINING.

FIRST YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
Geometry 5.....	Mathematics IV.
English 5.....	English I.
Mechanical Drawing 5, 10....	Mechanical Engineering I.
Military Drill 2, 4.....	Military I.

SECOND TERM.

Algebra 5.....	Mathematics II.
Geometry 3, 5 ($\frac{1}{3}$ term).....	Mathematics V.
Blacksmithing 2, 5 ($\frac{2}{3}$ term).....	Shopwork V.
Physics 5, 7.....	Physics I.
English 5.....	English II.
Mechanical Drawing $2\frac{1}{2}$, 5....	Mechanical Engineering II.
Military Drill $1\frac{1}{2}$, 3.....	Military II.

THIRD TERM.

Trigonometry 5.....	Mathematics VI.
Surveying 5, 7.....	Mathematics X.
Physics 5, 7.....	Physics II.
Tool Dressing 5.....	Shopwork VI.
Military Drill $2\frac{1}{2}$, 5.....	Military III.

SECOND YEAR.

FIRST TERM.

Mineralogy 5, 7.....	Chemistry VI.
Mine Surveying 3.....	Mathematics XIII.
Rhetoric 5.....	English IV.
Physical Laboratory 5, 7.....	Electrical Engineering I.
Economics 5.....	Political Science I.
Military Drill 1½, 3.....	Military IV.

SECOND TERM.

Metallurgy and Ore Dressing 5, 7.....	Chemistry XXI.
Assaying 5, 7.....	Chemistry VIII.
Chemistry 5, 7.....	Chemistry I.
Rhetoric 4.....	English V.
Psychology 5.....	Mental Science I.
Military Drill 1½, 3.....	Military V.

THIRD TERM.

Mining Engineering 5.....	Mathematics XV.
Assaying 5, 7.....	Chemistry X.
Chemistry 5, 7.....	Chemistry II.
Geology 5.....	Geology I.
Military Drill 2½, 5.....	Military VI.

BUSINESS COURSE.

FIRST YEAR.

FIRST TERM.

Bookkeeping 5, 3	Bookkeeping I.
Grammar 5	English I.
Arithmetic 5	Arithmetic I.
Military Drill 2, 4, or	Military I.
Physical Culture 1½, 3	Physical Culture I.

SECOND TERM.

Bookkeeping 5, 3	Bookkeeping II.
Grammar 5	English II.
Commercial Arithmetic 5	Arithmetic II.
Algebra 5	Mathematics A.
Military Drill 2, 4, or	Military II.
Physical Culture 1½, 3	Physical Culture II.

THIRD TERM.

Bookkeeping 5, 3	Bookkeeping III.
Composition 5	English III.
Commercial Arithmetic 5	Arithmetic III.
Algebra 5	Mathematics B.
Military Drill 2½, 5, or	Military III.
Physical Culture 1½, 3	Physical Culture III.

SECOND YEAR.

FIRST TERM.

Bookkeeping 5, 3.....	Bookkeeping IV.
Algebra 5.....	Mathematics I.
Rhetoric 5.....	English IV.
Economics 5.....	Political Science I.
Military Drill 2, 4, or.....	Military IV.
Physical Culture 1½, 3.....	Physical Culture IV.

SECOND TERM.

Bookkeeping 5, 3.....	Bookkeeping V.
Commercial Law 2.....	Commercial Law I.
Stenography 3.....	Stenography I.
Typewriting 5.....	Typewriting I.
Military Drill 1½, 3, or.....	Military V.
Physical Culture 1½, 3.....	Physical Culture V.

THIRD TERM.

Bookkeeping 5, 3.....	Bookkeeping VI.
Commercial Law 2.....	Commercial Law II.
Stenography 3.....	Stenography II.
Typewriting 5.....	Typewriting II.
Civics 5.....	Political Science II.
Military Drill 2½, 5, or.....	Military VI.
Physical Culture 1½, 3.....	Physical Culture VI.

SUB-FRESHMAN YEAR.

The course of instruction offered under this head is intended for young people who live at considerable distance from an academy or high school, and were unable to attend such, but have finished the eighth grade in a good public school. No tuition is charged. The work is distributed in the three terms as follows:

FIRST TERM.	SECOND TERM.	THIRD TERM.
English Grammar.	English Grammar.	English Grammar.
Composition.	Composition.	Composition.
Arithmetic.	Elementary Algebra.	Algebra.
History of the United States.	History of the United States.	Physical Geography.

According to a regulation of the board of regents no students may be admitted to this class who come from towns or cities of more than fifteen hundred inhabitants, or from such as are supporting good high schools. To enter this class, students must be fifteen years of age.

DEPARTMENTS OF INSTRUCTION.

MENTAL AND POLITICAL SCIENCE.

AGRICULTURE.

HISTORY AND LATIN.

HOUSEHOLD SCIENCE.

MODERN LANGUAGES.

MECHANICAL AND ELECTRICAL ENGINEERING

CHEMISTRY AND PHARMACY.

ENGLISH LANGUAGE AND LITERATURE.

MATHEMATICS AND ENGINEERING.

ZOOLOGY.

BOTANY AND HORTICULTURE.

ELOCUTION.

FLORICULTURE AND GARDENING.

BACTERIOLOGY.

DRAWING.

MILITARY.

PHYSICAL CULTURE.

BUSINESS.

MENTAL AND POLITICAL SCIENCE.

THOMAS M. GATCH, A. M., PH. D., PRESIDENT.

Course I.—*Economics*.—Senior year ; first term. During the first part of the term our aim is to familiarize the student with the principles of the science. The last part of the term is devoted principally to debates, informal discussions and theme work. Our library is well supplied with reference books in this department. Students are encouraged in original investigation. The labor question, socialism, taxation, money and tariff receive attention. Five hours a week. Ely's Outlines.

Course II.—*Civics*.—Junior year ; third term. Practical information is presented as to the rights and duties which attach to American citizenship. Constant care is taken to give reasons as well as justification for each power exercised by our government, and to inculcate in every way the moral obligations of good citizenship. Five hours a week. Willoughby, "Rights and Duties of American Citizenship."

Course III.—*Psychology*.—Senior year ; second term. This study presupposes a considerable acquaintance with the structure and functions of the brain and nervous system. Students acquire this knowledge in the laboratory under the direction of the professor of zoology. The intellectual faculties, the sensibilities and the will are carefully studied ; the various schools of philosophy are criticised and compared and themes are often required from members of the class. Five hours a week. Halleck.

AGRICULTURE.

JAMES WITHYCOMBE, M. Agr., Vice-Director and Professor of Agriculture.

F. L. KENT, B. Agr., Assistant Professor of Agriculture.

O. B. CONNER, Foreman.

The object sought throughout the entire agricultural course is to familiarize the student with the art and science of agriculture. This embraces the study of zoology, botany, chemistry and bacteriology, the sciences related to agriculture; and the supplementary studies of mathematics, economics, physics, history, language and other cultural branches, all of which broaden the course of study and tend to elevate the educated farmer to the intellectual level of other professions.

The college laboratories are strictly modern in their appointments and are supplied with up-to-date equipments, which afford the student unusual opportunities for making a thorough study of all the sciences related to agriculture.

While the theory of agriculture, as based upon the sciences, is being taught, the industrial side is not overlooked. Instruction is given in wood and iron working in the carpenter and blacksmith shops under competent supervision. The student is also taught how to handle and care for steam machinery, and is made thoroughly familiar with the mechanism of the farm traction engine.

The instruction given in the class-room is directly supplemented by actual demonstrations of the best agricultural practice on the college farm, thus giving to the student an opportunity to observe the methods employed, and enabling

him to note from time to time the results of the practical applications of science to agricultural methods.

The college and station farm consists of 199 acres, 140 of which are devoted to farm crops, pasture, and experimental purposes. The farm is equipped with dairy building, horse-barn, cattle-barn, silos, piggery, tool-house, engine-house, etc., and with typical specimens of several breeds of stock.

Students laboring on the farm and in gardens, receive pay at the rate of 10 cents per hour. Only comparatively few persons can be so employed, as the amount of work to be done is limited. Those only who by their work prove to be valuable laborers will be employed.

DAIRYING.

One of the purposes of the Oregon Agricultural College is to advance the business industries of the state. It is believed that dairying is one of the most important lines of work that can now be undertaken in Oregon. There is now a large body of land in the state which is especially adapted to this industry. For this reason dairying has been introduced as a branch of study in the agricultural course. A separate building has been provided for such instruction and it is fitted up with all the necessary machinery for carrying on the work in the most approved way. An expert dairyman is in charge of this work.

All students in the agricultural department will be required to study dairying not only as a science but as an art. Those taking the household science course will have the same opportunities as the agricultural students.

This is a line of practical work which, it is believed, will prove of great advantage both to the student and to the

state. The practical instruction includes both butter and cheese making.

A short course has been provided, as described elsewhere in the catalogue, whereby practical instruction in dairying may be obtained by those who can not avail themselves of a college course.

The instruction in applied agriculture extends through the freshman, sophomore, junior and senior years, as shown in the following synopsis of courses:

Course I.—*Breeds of Stock*.—Freshman year; third term. The study of the history of the different classes of farm stock, their origin and characteristics. By means of charts, in the class-room the student is made familiar with the different points of animal form preparatory to the use of the score-card system for judging farm animals. This is followed by a practical application of this system in judging dairy cows, beef cattle, mutton sheep and swine. In this manner the student obtains useful information relative to animal form and function, and thus becomes acquainted with the points of excellence in the typical pure bred, as well as the points of merit in the animal designed for the butcher's block. Five hours a week.

Course II.—*Theoretical Dairying*.—Sophomore year; first term. Theoretical dairying will be taught in the class-room for one-half term. Instruction will be given by text-book and lectures. Five hours a week for one-half term.

Course III.—*Drainage*.—Sophomore year; first term. The study of the general principles of drainage; laying out and construction of farm drains; the effects of drainage upon the chemical and physical conditions of the soil. Five hours per week for one-half term.

Course IV.—*Soils and Manures*.—Sophomore year; second

term. The origin and formation of soils ; soil tillage ; management and application of manures ; green manuring ; organic and mineral manures ; soil exhaustion ; rotation of crops, and methods of improving worn-out soils. Five hours a week.

Course V.—*Dairying*.—Junior year ; first term. (a) Practical work in the dairy for agricultural students. The principles taught in the sophomore year will be put into practice in the actual work of the manufacture of butter and cheese. The Babcock test, rennet tests, and curd tests, as well as the subjects of creamery accounting will receive due attention. Five hours a week.

(b) Practical work in the dairy for household science students. This work is practically the same as above. Wing's "Milk and its Products" will also be used as a text during a portion of the term. Five hours a week throughout the third term.

Course VI.—*Stock Feeding and Breeding*.—Junior year ; third term. Stock feeding covers the subject of rations for milk and meat production ; how best balanced for economical feeding. Stock breeding covers the subjects of atavism, heredity, in-and-in-breeding, variation, pre-potency and care of breeding animals. Opportunity is given for judging and scoring live stock, and for studying the essential points of breeds adapted to different purposes. Four hours a week.

Course VII.—*Veterinary Science*.—Senior year ; first term. This subject will be taught by lectures covering the anatomy of the horse, and taking up the diseases most common to domestic animals, giving causes, symptoms, and treatment for the same. Special stress is placed upon proper treatment to prevent disease in domestic animals. Five lectures a week.

Course VIII.—*Veterinary Science*.—Senior year; second term. Continuation of course VII. Five lectures a week.

Course IX.—*Veterinary Science*.—Senior year; third term. A continuation of courses VII and VIII. Five lectures a week.

Instruction is given largely by lectures, suitable books being selected for reference. Miles' book on drainage. Curtis' "Horses, Cattle, Sheep, and Swine." Warfield's "Cattle Breeding," Stewart's "Stock Feeding." Armsby's Manual of Cattle Feeding. Wing's "Milk and its Products." Shaw's "Study of Breeds." "Soil" by King. "Fertility of Soil" by I. P. Roberts.

HISTORY AND LATIN.

F. BERCHTOLD, A. M., Dean of College.

HISTORY.

The study of history is begun in the freshman year with Myers' General History as a guide.

The class reports for recitations in divisions of about thirty each, which enables the instructor to devote more attention to each individual student.

Although using Myers' History as a quasi guide, it has been our practice to give each student independent work, as much as possible, and then to subject such research to unreserved criticism and freest discussion in the class-room. This encourages originality, the mind gains power, courage, becomes keen and able to sift the essential from the nonessential. From his constant contact with concrete materials, matter outside of his textbook, he acquires the rarest of qualities—historic sympathy.

Course I.—*Greek and Roman History*.—Freshman year; first term. Includes the study of general Hellenic development; the Athenian leadership; the Hellenistic or Alexandrian conquests and kingdoms. The political organizations of republican Rome in the prae- and post-Punic periods. Study on the pagan empire; Teutonic migrations. The Christian empire under Roman control. Five hours a week.

Course II.—*Mediæval History*.—Freshman year; second term. A study of social and political institutions from the fifth to the fifteenth centuries. Five hours a week.

Course III.—*History of Eastern Peoples*.—Sophomore year; second term. A survey of the history of China, Japan and India. Religion, arts and general culture of Egypt, Chaldaea, Assyria, Babylonia, Persia. Five hours a week.

Course IV.—*Modern History*.—Sophomore year; third term. This is a study of the era of the reformation and renaissance. (1490-1648). A general study of the age of Louis XIV., Frederick the Great, Anne and the Georges, Maria Teresa, and Peter the Great. The great French revolution and the wars of Napoleon. The states-general of 1789 to congress of Vienna, 1815. German and Italian freedom and unity. Discussions touching the material progress of the age; famous works of art; foundations, inventions, discoveries, enterprises, improvements and investigations.

The college is well supplied with wall maps, and charts, and there is a good working library of historical reference books.

In addition to the individual work of the student, as outlined above, lectures are given on the more important periods, viz., the great reformation, thirty years' war, English reformation, the French revolution, etc.

LATIN.

As may be seen in the outline of the courses of study, Latin is offered as an elective to the students in agriculture, and mechanical and electrical engineering. It is required of students in the pharmacy course. The young ladies of the household science course may elect either Latin or a modern language.

Course I.—*Elementary Latin*.—Freshman year; first term. First three declensions and first and second conjugations. Numerous exercises in translating Latin into English as

well as English into Latin. Latin reader: Collar's *Via Latina*.

Course II.—*Elementary Latin*.—Freshman year; second term. Declensions and regular conjugations finished. Review. Exercises in translating. *Via Latina*.

Course III.—*Elementary Latin*.—Freshman year; third term. Irregular verbs. Subjunctive mood. Ablative absolute. Sequence of tenses, etc. Exercises. *Via Latina*.

Courses IV to XII.—*Advanced Latin*.—Sophomore and succeeding years. The first year's instruction is largely grammatical, prominence being given to Latin writing as the best method of acquiring a mastery of the language, which is of such a character as to be eminently suggestive and helpful to the student of English. This preliminary work done, the student is then trained to appreciate its literature. Attention is called, during the reading of various authors, to those numerous problems in the history, thought and institutions of the Romans which illustrate similar phenomena noticeable among ourselves. The contribution of the Roman world to the language, literature, and institutions of our time is so great that a thorough acquaintance with that life is of the highest educational value.

HOUSEHOLD SCIENCE.

MARGARET C. SNELL, M. D., Professor.
MARY AVERY, Assistant in Sewing.

Self interest, and public interest, make it apparent to every intelligent person how greatly in need are subjects pertaining to the home of being "touched to fine issues;" hence their introduction as studies into college curricula.

We have been reviled as "the most common schooled, and least cultivated, among all civilized nations," and this largely through our deplorable indifference to, and ignorance of, the common facts and necessities of life.

The home as we find it to-day has scant warrant that anything born of its teaching is worth while to impart, yet the problem grows of how to get better results, how to lessen the labor of the farmer's wife, the washer-woman, the cook, the boarding-house keeper, the city missionary, the school teacher, the woman of fashion.

The solution requires something more than the knitting of the brow over theories; there must be actual testing of these theories by practice in the college laboratory, if they are to have value and permanence. The precious acquisition of the scholar who *knows*, must be further supplemented by that of the artist who *does*.

The various subjects pertaining to home life are taught under the following heads:

Course I.—*General Hygiene*.—Freshman year; first term. Good health is acknowledged as one of the prime factors of success in life; lectures and talks on this important subject

are not neglected. The amenities of home, and readings on kindred topics, give mental occupation to the sewing hour. One hour a week.

Courses II, IV, V.—*Sewing*.—Freshman year. During the first term there are sewing lectures and practice work, one hour a day, on sewing samples. Here are acquired and strengthened those invisible impulses: industry, dexterity, patience, exactness. Four hours a week.

Second term, sewing continued. Four hours a week.

During the third term sewing is combined with the making of simple garments. Readings, conversation. Five hours a week.

Courses VI, VII, VIII.—*Dressmaking*.—Sophomore year. Cleverness with scissors, tape line, and needle finds in dressmaking, millinery, home furnishing, a large field for the application of art principles to the living, moving canvas of actual life.

Instruction in dressmaking is an important branch of domestic science. Lectures will be given on the following subjects: The methods of manufacturing thread, cloths and other dressmaking material; hygienic principles of dressmaking; study and sketching of drapery; history of costume, etc.

During the first term the work includes draughting and making simple skirts, cutting, fitting and making lined waists from patterns; a study of the texture of goods. Five hours a week.

Throughout the second and third terms instruction is given in draughting and making lined waists, matching stripes and plaids, study of woolen textiles. Five hours a week.

Courses IX, X, XI.—*Cookery*.—Junior year. The first

term's work includes instruction in canning of fruits, one-half term; three lectures; one hour a day practice work in the kitchen laboratory; technological cookery; preparatory work in chemistry of foods.

The second and third terms' instruction includes practice work in cookery. Four hours a week throughout the year.

Course III.—*Etiquette*.—Freshman year; second term. Lectures and talks on social forms and usages; the art of entertaining; readings on the art of conversation. Mahaffy. One hour a week.

Course XII.—*Aesthetics*.—Senior year; first term. Lectures and recitations on the subject of aesthetics.

This term is given to the general subject of aesthetics in its relations to the subjective and objective world; the kinds and laws of beauty; class readings from various authors on aesthetics; the application of aesthetic principles to discourse as we find it illustrated in the great master pieces of literature. Five hours a week.

Course XIII.—*Aesthetics*.—Senior year; second term. Application of aesthetic principles to the fine arts, with a study of the best authors on these varied subjects. The two arts receiving especial attention during the coming year will be architecture and painting. Five hours a week.

Course XIV.—*Domestic Lectures*.—Senior year; third term. The term's work will include lectures on the following subjects: Special hygiene, including parentage, care of children, heredity, etc.; sanitation of the home; home furnishing; emergency lectures; fireside practice, etc. Five hours a week. Gleason's Special Hygiene.

MODERN LANGUAGES.

ELLEN J. CHAMBERLIN, A. M., Dean of Women.

Opportunity to study German is offered throughout the different courses and is compulsory in the course in pharmacy during the sophomore and junior years. We teach in a large measure by the conversational method. We aim to bring the student so far that he can read with ease and facility, and understand so much of the language as will be most helpful to him in practical life. A knowledge of German is a business possession of undoubted value for any young man, or young woman.

Courses I to VI.—*Elementary German*.—Collar's Eysenbach—German grammar; translation of easy prose and poetry as contained in Hewett's German reader. Composition.

Courses VII to XII.—*Advanced German*.—Nathan der Weise, Hauff's Das Kalte Herz, Fouque's Undine, Heyse's Anfang und Ende, Schiller's Wilhelm Tell; Maria Stuart; Das Lied von der Glocke. Eysenbach's grammar continued and reviewed. Composition; syntax.

MECHANICAL AND ELECTRICAL ENGINEERING.

GRANT A. COVELL, M. E., Professor.

E. C. HAYWARD, E. E., Assistant.

M. CLYDE PHILLIPS, B. M. E., Instructor in Ironwork and Drawing.

D. W. PRICHARD, Instructor in Woodwork.

Students in this department are allowed to choose either the course in mechanical engineering or the course in electrical engineering. Each course leads to the degree of Bachelor of Science, and the two courses are identical until the beginning of the junior year.

The course in mechanical engineering is intended especially for young men who expect to choose an industrial vocation and for those who are already, or expect to be, connected with some of the manufacturing establishments of the country.

The course in electrical engineering is designed to meet the needs of those who desire to turn their attention towards electrical science, the designing, the installation and the management of electric light and power plants, etc.

The shops are well equipped with tools and machinery from the best makers in the country; the idea being not only to have the shops well supplied with the necessary tools but also to make each shop a model as regards quality of equipment and systematic arrangement.

The uses of the various tools in the shop are taught by a series of exercise pieces which the student is required to make. After completing the exercises, the regular work consists in building and repairing machinery in the machine shop, mending farm implements, and making tools in the blacksmith shop, and other useful articles in the wood shop.

So far as possible, all work in the shops is executed from drawings and blue prints, which must be followed accurately.

In the drafting room the student begins with linear drawing and follows a progressive course until he is able to make complete working drawings of whole machines, and finally he is encouraged to produce designs of his own and to make complete drawings and blue prints of them.

The scientific principles involved in machines and mechanical movements are taught in the class-room, as well as the application of mathematics to problems in mechanical engineering. The student is required to solve original problems and to depend upon his own judgment and ingenuity as far as possible.

EQUIPMENT.

The machine shop is equipped with one 24" x 24" iron planer, one universal milling machine, one universal tool grinder, one radial drill, one 20" drill press, one 20" engine lathe, one 16" engine lathe, three 14" engine lathes, one 15" shaper, one emery grinder, two 10" speed lathes, twelve bench vises, and numerous small tools, such as hammers, chisels, drills, reamers, taps, dies, etc.

The blacksmith shop contains twenty stationary forges operated by an electric motor fan. Each forge is provided with anvil, hammers and tongs. The shop also contains two vises, a swedge block and a full set of swedges, fullers, and heading tools.

The woodshop contains one 4" four-sided moulder, one 24" surface planer, one iron saw table with rip and cut-off saws, one band saw, one jig saw, one 20" pattern-maker's lathe, one post boring machine, four 12" wood-turning lathes, and twenty hand benches, each equipped with a set of tools con-

sisting of saws, planes, chisels and other small tools. Power is supplied by a 10 horse power electric motor.

The power house contains a 54 inch tubular boiler, pump, injector, feed water heater and a 40 horse power high speed automatic engine, belted direct to two 12½ kilowatt generators. These generators operate the motors in the machine shop, wood shop and blacksmith shop, and also furnish lights for the college buildings.

The steam, electrical and heating plants of the college furnish opportunity for much valuable experimental work in engineering, such as tests of boilers, engines, dynamos, motors, fans, pumps and injectors. The department is supplied with indicators, gauges, planimeters and other instruments to facilitate this work.

A Riehle testing machine of 50,000 pounds capacity, operated by an independent motor, affords means of testing the strength of metals, woods, stones or brick.

The following is an outline of the work done in the mechanical department:

SHOPWORK.

Courses I, II and III.—*Woodwork*.—Freshman year. A course in woodwork which includes carpentry, joinery and wood-turning, also the care and use of tools. Five hours a week throughout the year.

Courses IV, V and VI.—*Blacksmithing*.—Sophomore year. In this course the student is taught how to make and manage a forge fire; to shape iron by bending, drawing, upsetting and welding, and finally to make and temper cutting tools for the shops. Five hours a week.

Course VII.—*Machine Shop*.—Junior year; first term. This course is devoted principally to chipping, filing, polishing and hand work. Five hours a week.

Courses VIII and IX.—*Machine Shop*.—Junior year; second and third terms. These include a series of exercise pieces in turning, shaping, milling and drilling which the student is required to make from drawings. Five and four hours a week respectively.

Courses X, XII and XIV.—*Woodwork*.—Senior year. These courses are elective and are intended for students who desire to specialize in this branch. Particular attention is given to the care and management of wood-working machines and to pattern-making. Five hours a week throughout the year.

Courses XI, XIII and XV.—*Ironwork*.—Senior year. These are elective courses and follow course IX. The work consists of constructing parts of machines, repair work, and making tools for the shops. Five hours a week throughout the year.

MECHANICAL ENGINEERING.

Courses I, II and III.—*Mechanical Drawing*.—Sophomore year. In these courses the student begins at once to make mechanical drawings of simple objects and finally makes sketches of machines from which working drawings are made. Ten hours, the first term; five hours the second term and three hours the third term.

Course IV.—*Mechanism*.—Junior year; first term. This course treats of the motion of machine parts, and is introductory to the course in machine design. Five hours a week.

Courses V and VI.—*Descriptive Geometry*.—Junior year; first and second terms. The work in these courses is largely drawing. It involves the solution of problems in projection and intersection of lines, surfaces and solids. Five and three hours a week respectively.

Course VII.—*Steam Engines and Boilers*.—Junior year; third term. A study of the construction, care and operation of steam engines and boilers; recitations and lectures. Four hours a week.

Course IX.—*Thermodynamics*.—Senior year; first term. Steam and other engines considered as heat engines. Two hours a week.

Courses VIII, XII and XIV.—*Mechanics of Engineering*.—Senior year. A course in applied mechanics. The first two terms are occupied with a discussion of statical and dynamical problems. During the last term the strength of materials is studied with special reference to beams, girders and trusses; also the mechanics of fluids relating to pressure, flow and carrying capacity of pipes and open ditches. Five hours a week throughout the year.

Courses XI and XV.—*Machine Design*.—Senior year; second and third terms. A course applying the principles brought out in the courses in mechanism and mechanics to the design and construction of machine parts. Numerous practical problems are solved, the data for many of them being taken from machines used in the college, so that the student may compare his results with those used in practice. Considerable draughting is done in connection with this course. Three and five hours a week respectively.

PHYSICS.

Courses I and II.—*Elementary Physics*.—Junior year; second and third terms. These courses cover the usual topics of mechanics, heat, electricity and magnetism, sound and light. Instruction is given by means of lectures and recitations, alternating with laboratory practice. Seven hours a week.

Course III.—*Physics*.—Senior year; first term. A laboratory course, which is a continuation of the preceding courses, and deals more especially with experiments in heat, light, sound and electricity. Seven hours a week.

ELECTRICAL ENGINEERING.

Course I.—*Physics*.—Junior year; first term. A special course in elementary physics provided for students in electrical engineering, covering practically the same ground as courses I and II in Physics. Five hours a week.

Courses II and III.—*Electricity and Magnetism*.—Junior year; second and third terms. Dealing with the general theory of electricity and magnetism and their most common application in practice: such as the telephone, telegraph, electro-plating, electric lighting, etc. In the laboratory the student becomes familiar with the usual measurements employed by the electrical engineer. Special attention is given to the calculation of magnetic circuits, thus leading up to the course in dynamo design. Lectures, recitation and laboratory work. Seven hours a week.

Courses IV, V and VI.—(a) *Alternating currents*.—Senior year. Being a brief development of the elementary theory of alternating currents, using both the graphical and analytical methods of calculation. A continuation of courses II and III. Lectures and recitations.

(b) *Dynamo Design*.—Theory and practice of the design of direct and alternating current dynamos and motors, including calculation and construction of field magnets, armatures, commutators, etc. Lectures and recitations, supplemented by the making of models in the laboratory.

(c) *Practical Electrical Engineering*.—Considerable time will be devoted to practical engineering problems, such as the calculation of circuits, installation of lighting and power plants, power transmissions, etc.

(d) *Laboratory*.—An advanced course, being a continuation of the laboratory work carried on in courses II and III, including, in addition to the more common measurements, the measurement of insulation resistance, location of faults in cables, and construction of apparatus. Three hours recitation and lectures and four hours laboratory throughout the year.

CHEMISTRY AND PHARMACY.

A. L. KNISELY, M. S., Professor.
JONH FULTON, B. S., Assistant Professor.
C. M. MCKELLIPS, PH. G., PH. C., Instructor.
FRANK E. EDWARDS, B. M. E., Instructor.

The study of chemistry is begun in the second term of the sophomore year.

Course I.—*General Inorganic Chemistry*.—Non-metals.—Sophomore year; second term. A daily exercise throughout the second term is devoted to recitations, lectures and laboratory practice. In this course special attention is given to the fundamental principles of the science, which are suitably illustrated either by experiments performed by the student in the laboratory, or, when too intricate and expensive of time, by the instructor before the class in the lecture room. The elements are discussed individually as well as their more important compounds.

The *practicum* of this course consists of a series of laboratory exercises dealing with the elements studied and is designed to introduce the student to chemical manipulation. Seven hours a week.

Course II.—*General Inorganic Chemistry*.—Sophomore year; third term. The study of the metals is entered upon in the third term and is conducted similarly to the study of the non-metals. The more important metals are individually discussed under the following heads: history, occurrence in nature, properties, preparation, uses, tests, and compounds. Special attention is given to metals and their compounds which are of industrial importance.

The laboratory work of the third term consists of a study of the properties of the metals, being an introduction to qualitative analysis. Seven hours a week.

Course III.—*Qualitative Analysis*.—Junior year; first term. The student is required to apply and study the reactions involved in the ordinary methods of separation and identification of substances. The study includes the reactions, ordinarily used in qualitative analysis, but deals with only those substances usually met with in chemical work. The student repeatedly works through a scheme of separation in making qualitative analyses of unknown substances. Four hours a week.

Course IV.—*Agricultural Chemistry*.—Junior year; second term. This course deals with the more intimate relation of the science to agriculture. Such topics as soil composition, elements essential to plant growth, soil exhaustion, fertilizers; chemistry of cattle foods, nutrition, dairy products and food adulteration are dealt with as fully as time permits. Prerequisites, courses I, II and III. Five hours a week.

Course V.—*Quantitative Analysis*.—Senior year; first term. The student is required to make the ordinary fundamental determinations of moisture, aluminum, calcium, magnesium, copper, lead, potash, sulfuric acid, phosphoric acid, chlorine, and carbonic acid by gravimetric processes; estimations by volumetric methods including alkalimetry, acidimetry, precipitation, and oxidation will be undertaken. The work is so planned as to familiarize the student with the standard gravimetric and volumetric methods. This is a required course for all pharmacy students and is elective for students who have completed courses I, II and III. Seven hours a week.

Course VI.—*Determinative Mineralogy*.—Senior year; first term. An elective laboratory course open to seniors in both agricultural and mechanical courses. The student will make use of the blowpipe and reagents to determine and classify the more common metal-bearing rocks, and the ordinary gangues. Elective. Seven hours a week.

Course VII.—*Quantitative Analysis*.—Senior year; second term. A continuation of course V. Elective. Seven hours a week.

Course VIII.—*Assaying*.—Senior year; second term. A course in practical assaying of gold and silver ores. Must be preceded by courses I, II, III. Elective. Seven hours a week.

Course IX.—*Quantitative Analysis*.—Senior year; third term. A continuation of courses V and VII. Elective. Seven hours a week.

Course X.—*Assaying*. Senior year; third term. A continuation of course VIII. Elective. Seven hours a week.

Course XI.—*Chemistry of Common Life*.—Junior year; first term. This is a short course treating of organic compounds of common life. It alternates during the first term with course III. This work is required of all students in agricultural and household science courses. Three hours per week.

Courses XII, XIII and XIV.—*Chemistry of Foods*.—Senior year. An elective extending through the senior year in the household science course. It is an expansion of the work in course XI, but limited to a study of foods from a chemical and scientific standpoint. Seven hours a week.

Course XV.—*Qualitative Analysis*.—Junior year; second term. This course is a continuation of course III, and is designed for pharmacy students. It gives practice in the

analysis of unknown mixtures for both acids and bases with special reference to the needs of pharmacists. Seven hours.

Courses XVI, XVII and XVIII.—*Medical Chemistry*.—Junior year. This subject is open only to students of the pharmacy course. It alternates throughout the year with laboratory practice. It is a more advanced course in chemistry than I, II and III, and embraces inorganic and organic chemistry. Seven hours per week.

Courses XIX and XX.—*Pharmaceutical Analysis*.—Senior year; second and third terms. Under this head is taken up the separation, identification and determination of the active constituents of alkaloidal drugs. During the spring term practical laboratory work in Toxicology is given. Ten hours a week.

GRADUATE ELECTIVES.

Elective work in chemistry is offered as a major or a minor subject for two years to candidates for the degree of Master of Science.

Advanced Analysis.—This course is intended for those who may desire to specialize in chemical work. It provides a greater variety of analytical work than can be given in course V. It offers such work as the following: analysis of limestone, coal, iron ores, milk, butter, cheese, water, urine, sugar, and various other materials. A student desiring to investigate along any particular line, as mineral, sanitary, or agricultural chemistry, may do so. This course is open as a major subject to students who have completed courses I, II, III and V. Others who may elect chemistry as a major subject will be assigned work in accordance with their previous attainments in the subject. With the above course in analysis a parallel course of reading must be taken,

upon which the student will be required to pass a satisfactory examination at the end of the year. The work of the last year will be left largely to the student's choice, subject to the approval of the head of the department, and will serve as the basis for a graduation thesis.

GEOLOGY.

Course I.—*Geology*.—Senior year; third term. The course opens with work designed to acquaint the student with the common rocks and minerals as to their physical characters and appearance. The geological and mineralogical cabinets offer abundant opportunity for the study of specimens. The remainder of the course consists in a study of the aqueous, atmospheric, igneous, and organic agents in the earth's history; the structure and arrangement of rocks and the order of succession of strata. Elective in the agricultural and household science courses.

PHARMACY.

Courses I and III.—*Pharmacognosy*.—Junior year; second and third terms. In these courses are considered both the gross structure and characteristics of the crude drugs and chemicals. The student is taught the appearance, taste, color, odor, fracture and habitat of the various crude drugs, and also receives careful drill on their Latin and English names. Special attention is directed toward the learning of the scientific classification of the vegetable drugs. The student has access to the specimens for study, and special effort is made to train the senses to the recognition of each of the drugs considered.

The pharmacognosy of the senior year consists in a thorough review of the work of the junior year and practice

in the recognition of powders, liquids, chemicals, and pharmaceutical preparations. Two hours a week, Spring term.

Courses II, IV and VII.—*Pharmacy*.—Junior year. By means of a series of lectures and recitations during the first term, the student is made familiar with the nature and objects of the practice of pharmacy, as well as with the scientific principles underlying it. His attention is directed particularly to the various classes of Pharmacopœial preparations, beginning with those of the more simple character and gradually advancing until a thorough understanding is acquired concerning those of the most complex formulas.

Definitions are introduced wherever admissible, being supplemented by descriptive and theoretical considerations when necessary for a better understanding of the subject.

The work of the second and third terms is devoted largely to laboratory practice, during which time the student has ample opportunity for the practical application of the knowledge gained in the lecture room, and in the acquirement of pharmaceutical technique.

The preparations of the Pharmacopœia receive special attention, each student being required to make, independently, a sufficient number of these preparations to insure a thorough understanding of the processes and manipulations involved in their manufacture. Various unofficial compounds are also considered from time to time, especially those of the National Formulary.

The laboratory work is under the direct supervision of an experienced pharmacist and each student receives considerable personal attention. The character of the instruction is such as will be of much practical benefit to the student in the subsequent event of his becoming a dispensing phar-

macist. Two hours a week, first term, and five during second and third.

Course V.—*Therapeutics and Doses*.—Junior year; first term. The therapeutical uses of medicines serve as a basis for classifying them in a manner which will facilitate study. The definitions of medical terms are given special attention in the junior year. In this connection the student also learns the minimum and maximum doses of all remedial agents in active use in the modern practice of medicine. Two hours a week.

Course VI.—*Nomenclature*.—Junior year. In this connection the student is shown the practical application and use of the Latin language in the professions of medicine and pharmacy.

The Latin titles of the Pharmacopœia, National Formulary and the more common terms that occur in the prescription are made the subject of a series of recitations. One hour a week, first term.

Course VIII.—*Materia Medica and Therapeutics*.—Senior year; first and second terms. All substances which find use in medicine are here studied one by one as to source, Latin and English names, formula (in the case of chemicals), compounds and preparations, properties, method of preservation, industrial and domestic use, impurities and adulterations, antidote (in case of poisons) and dose.

In the consideration of crude organic drugs, attention is especially directed to the constituents responsible for the medicinal activity of the drug, e. g., alkaloids, glucosides, volatile oils, etc. Three hours a week.

Course IX.—*Operative Pharmacy*.—Senior year; first term. This course is a continuation of that of the junior year and includes such preparations of the Pharmacopœia and of the

newer classes of remedies as were not considered in the junior year. Attention is given to the manufacture of the more difficult preparations, both galenical and toilet, and to the correct methods of manipulation involved in preparing medicines for dispensing in cachets, soft capsules, etc.

The composition of the more important Pharmacopœial preparations, and of the percentage strength of the active constituents of each, are made the subject of close study. The work of the term ends with a final review of the entire subject of pharmacy. Six hours a week.

Course X.—*Prescription Practice*.—Senior year. The recitation work consists of reading, interpreting, criticising prescriptions and calculating doses. Special attention is given to incompatibilities and to the solubility of chemicals. Unsightly, dangerous and explosive mixtures are also considered under this head. In this laboratory course and that of operative pharmacy the student gains experience for the prescription counter, learning the difficulties there met with and how best to overcome them. He also gains in manipulative skill in making extemporaneous preparations.

Each student is required to personally perform the operations under the direct supervision of the instructor. The student works not from book prescriptions, but from prescriptions written in the ordinary practice of physicians and found on file in the drug stores. Six hours a week second and third terms.

Course XI.—*Pharmacognosy and Synonyms*.—Senior year; third term. The pharmacognosy of the senior year consists in a thorough review of the work of the junior year and practice in the recognition of powders, liquids, chemicals, and pharmaceutical preparations.

In addition to the knowledge of the scientific classifications

of the medicines already considered up to this time, the student is further instructed regarding many "common names," or synonyms, in general use in the ordinary practice of pharmacy. Three hours a week.

Course XIII.—*Toxicology*.—Senior year; third term. The important active poisons—both mineral and vegetable—are studied. Their physiological action, characteristic symptoms that follow their use, treatment and antidote are noted and commented upon. Attention is directed to the conditions and regulations provided by the Oregon Pharmacy law for the handling and sale of poisons within the state. One hour a week.

From time to time special lectures are given on hygiene, pharmaceutical jurisprudence, etc.

STATE EXAMINATION AND REGISTRATION.

At its meeting held on December 14, 1898, the Oregon State Board of Pharmacy passed the following resolutions endorsing the course here offered:

WHEREAS, The Oregon State Agricultural College has established a course in pharmacy and chemistry that meets with the hearty approval of this Board, inasmuch as it offers a large proportion of practical work; therefore, be it

Resolved, That the Oregon State Board of Pharmacy acting in accordance with Sections 5 and 6 of the Oregon Pharmacy Law as amended, grant to students of the Oregon Agricultural College, who complete the full course and hold a diploma from said institution, after they shall have been subjected to such examination, at Corvallis, Oregon, as this Board may approve, on the completion of the senior year, a certificate to act as a registered pharmacist in this state.

Provided, That any student who may have taken the last two years of the course only and who does not hold the regular diploma from the said institution, on passing the examination aforesaid shall only be granted the certificate of a registered assistant.

The training in the pharmaceutical course is largely conducted in the laboratory for it is only by this means that the student can form an intimate personal acquaintance with the material and the best methods of manipulation. Thus it is that he receives systematic practice in dispensing, in the examination of drugs as to identity, purity,

and strength, and in the manufacture of various preparations from crude drugs. The requirements of the U. S. Pharmacopœia are always kept in mind, and the student is always held strictly responsible for the purity of his preparations and the accuracy of his work. The course aims to teach students facts and principles of immediate use in the drug store, adapting the work to the needs of the practical pharmacist and manufacturing chemist. It is, however, further recognized that a thorough foundation must be laid for this work, and in view of this, two years of preparatory work are required in the college, or its equivalent in some other school. Students who have had equivalent work elsewhere can complete the course in pharmacy in two years.

EXPENSES.

Neither tuition nor incidental fees are charged at this institution, but to cover the cost of material used and wasted in the laboratories a small laboratory fee and a deposit for breakage will be charged in the chemical and pharmaceutical laboratories as is the custom in all institutions. These fees are payable each term strictly in advance.

Chemical laboratory: Sophomore and junior years:

Material.....	\$1.50
Deposit for breakage.....	1.50

Senior Year:

Material.....	\$2.50
Deposit for breakage.....	1.00

Pharmaceutical Laboratory:

Material.....	\$2.50
Deposit for breakage.....	1.00

Text and reference books in chemistry: General Chemistry, Young; Qualitative Analysis, Johnson and Prescott, Irish; Quantitative Analysis, Smith and Cheever; Agricultural Chemistry, Johnson; Organic Chemistry, Remsen;

Roscoe and Schorlemmer, Fresenius, Crooke's Select Methods, Sutton's Volumetric Analysis, Stillman Engineering Chemistry, Official Methods, etc.

Text and reference books in pharmacy and materia medica: Handbook of Pharmacy, Coblenz; Practice of Pharmacy, Remington; Quantitative Analysis, Sturmer and Vanderkleed; Organic Analysis, Prescott; The Art of Compounding, Scoville; Medical Chemistry, Barclay; Materia Medica, Culbreth; same, White and Wilcox; Dose Book, Hoak; U. S. Dispensatory; U. S. Pharmacopœia; same, of Homœopathy; National Formulary. Numerous other books and trade journals are to be found in the college library and are accessible to students.

ENGLISH LANGUAGE AND LITERATURE.

J. B. HORNER, A. M., LITT. D., Professor.

IDA B. CALLAHAN, B. S., Assistant Professor.

Courses I and II.—*English Grammar*.—Freshman year; first and second terms. Review in parsing and analysis of sentences, five weeks. Oral and written exercises in sentence-making with special reference to the concord, government, and order of words, twenty weeks. All recitations in grammar to be accompanied with exercises in spelling. Five hours a week. Maxwell's Advanced English Grammar.

Course III.—*English Composition*.—Freshman year; third term. Sentence making with reference to clearness, force and elegance, six weeks. Capitalization, punctuation and letter-writing, four weeks. Five hours a week.

Throughout the freshman year the class work will be interspersed with short compositions to be corrected under the direction of the instructor. Also each term, the student will prepare a synopsis of a book written by an approved American author.

Freshmen found deficient in preparatory studies may at the discretion of their instructors be assigned to the sub-freshman class in order to make up such deficiency. Students before promotion from this course must be able to pass an examination in spelling and grammar equivalent to that required for a first-grade teacher's certificate.

Courses IV and V.—*Rhetoric*.—Sophomore year; first and second terms. The work of the two terms includes a study

of style, description, narration, exposition, argumentation and oratory. Four and five hours a week respectively.

The student before promotion from course five must be able to write good essays, orations, lectures and newspaper articles.

Course VI.—*English Literature*.—Sophomore year; third term. Caedmon to Shakespeare with special study of Chaucer, Spenser, Jonson, Bacon, and Shakespeare. Supplementary reading from the college library. Required at least one paper from each student a week. Five hours a week.

Course VII.—*English Literature*.—Junior year; first and second terms. The study of English literary masterpieces continued. This course is open to students in pharmacy and mechanical and electrical engineering the first term, and to students in agriculture and household science the second term. Five hours a week.

Course VIII.—*American Literature*.—Junior year third term. A study of American authors with supplementary reading from the college library. At least two papers each week are required on the books read. This work is also elective during the third term, senior year in the agricultural and the mechanical and electrical engineering course.

MATHEMATICS AND ENGINEERING.

GORDON V. SKELTON, C. E., Professor.
CHARLES L. JOHNSON, B. S., Instructor.

The course in Mathematics includes such of its branches as the distinctive aims of this institution require, and conforms itself, in general, to that in use in the most successful agricultural colleges.

That the study may to the fullest extent strengthen and discipline the mind for connected, logical thought, thoroughness and accuracy are insisted upon at all times. In the class-room all principles and demonstrations must be presented in an orderly and logical manner. The constant aim is to cultivate the powers of insight, judgment, and originality.

To meet existing conditions, it is necessary to so arrange the freshman mathematics, for the present, as to make it possible for students who come without preparation in algebra, but who are otherwise qualified, to enter the freshman class. To this end courses Ia, IIa and IIIa are offered. It is earnestly advised that students prepare themselves for the regular courses. In the main, the same work is accomplished in these as in the regular courses during the freshman year, but the student will have to work harder and will have less time for reviews and practice drills upon the principles.

Course I—*Algebra*.—Freshman year; first term. From simple indeterminate equations to ratio and proportion.

This course is open to students who have completed the sub-freshman work and to new students who can satisfy the department that they are prepared for the work. A review of about ten days will be devoted to the topics that precede simple indeterminate equations. Students unable to successfully pass this review will be required to drop back to course Ia. The subjects taught are those found in Wentworth's Higher Algebra which is used in all the freshman courses as a text. Five hours a week.

Course II—*Algebra*.—Freshman year ; second term. From ratio and proportion to theory of numbers. This course is open to all students who have successfully passed course I. Five hours a week.

Course III—*Algebra*.—Freshman year ; third term. From the theory of numbers on. This course is open to students who have had courses I or II or their equivalent. Five hours a week.

Courses Ia, IIa, IIIa.—The work in algebra will be divided into three parts which will be given respectively in the first, second and third terms of the freshman year under the conditions and to the students specified above. A satisfactory grade in any one course is necessary before pursuing the next higher. Students taking these courses must expect to devote a great amount of time to the work.

Course IV—*Plane Geometry*.—Sophomore year ; first term. This course includes all that is found in the first four books of plane geometry in any standard text, as Wentworth's. Special emphasis is laid upon definitions and principles. Original demonstrations are given and much time is devoted to original theorems and problems and at all times proofs and demonstrations are freely criticised and discussed in the class-room. Five hours a week.

Course V—*Plane, Solid and Spherical Geometry*.—Sophomore year; third term. This course includes book V of plane geometry and all of solid and spherical geometry. Students must have had course IV before taking this. Five hours a week.

Course VI—*Trigonometry*.—Sophomore year; third term. Students must have had all the preceding courses before taking this. Only enough time is given to spherical trigonometry to enable the student to solve the spherical triangle. Much time is devoted to practical triangulation and measurements. The department is supplied with all the necessary instruments which the students use under the direction of the instructor. The college has two most carefully measured base-lines, one 640 feet and the other 1000 feet long, which are used in the triangulations. Five hours a week.

Course VII—*Plane Analytical Geometry*.—Junior year; first term. This work is required of all students taking the mechanical and electrical engineering courses. The work embraces the subjects treated in Nichols' Analytics, which is used as a text. Five hours a week.

Course VIII—*Differential Calculus*.—Junior year; second term. This course is required of the same students as is course VII. Among the topics considered are differentiation and applications, evaluation of indeterminate forms, expansion of functions, Taylor's and Maclaurin's theorems, maxima and minima, points of inflection, curvature, change of independent variable, functions of two or more variables, asymptotes, curve tracing, etc. Five hours a week.

Course IX—*Integral Calculus*.—Junior year; third term. Among the topics considered are direct integration, definite integrals and applications, integration of rational fractions, integration by rationalization, integration by parts, integra-

tion of trigonometric forms, etc.; applications to finding the lengths and areas of curves, surfaces and volumes of solids of revolution, etc.; double and triple integration and applications. In this course as in course VIII, great stress is laid upon practical applications, and a large number of practical problems are solved. Five hours a week.

Course X.—*Surveying*.—Junior year; third term. The greater part of the time is spent by the student in the field with the various instruments. He is required to make surveys from descriptions given him as well as to write descriptions from surveys made by himself. In all cases notes must be carefully kept and worked up in the office.

The engineering department is equipped with the necessary instruments, including a railroad compass, transit with solar attachment, plane-table, Y level, hand-level, rods, chains, tapes, etc.

Course XI.—*Astronomy*.—Senior year; third term. That this most elevating and refining subject may be open to a greater number of students, it will be confined to descriptive astronomy and may be taken by students who have completed courses I to V, inclusive. Much time will be devoted to uranography. Five hours a week.

Course XII.—*Agricultural Engineering*.—Senior year; third term. This course is open to students who have completed course X. Under this head will be given instruction in road location and construction, including consideration of various road materials; designing of highway bridges; inspection of existing structures; designing, locating and constructing agricultural drainage systems; laying out farm buildings, etc. Instruction given in the class-room will be applied wherever possible. Five hours a week.

Course XIII.—*Mine Surveying*.—Junior year; first term. The instruments and their adjustments, form of field notes, maps and their construction, methods of connecting underground surveys with the surface, methods of traversing underground, etc., will be considered. This work must be preceded by course X. Three hours a week.

Course XIV.—*Tunneling and Leveling*.—Junior year; second term. The various problems of alignment, grade, and constructive details of tunneling and underground work will be considered. Much time will be devoted to the survey, location and construction of hydraulic works. Five hours a week.

Course XV.—*Mining Engineering*.—Senior year; third term. The subjects treated are the planning and laying out of framed structures, power plants, roads, dams, reservoirs, and hydraulic engineering works, etc. Five hours a week.

ZOOLOGY.

A. B. CORDLEY, M. S., Professor.
F. M. McELFRESH, B. S., Assistant.

The work in this department is designed to give the student that knowledge of biological laws which is to-day regarded as an essential part of a liberal education. It aims to create a growing interest in the study of our native birds, insects and other animals and their interrelations with one another, with native and cultivated plants and with rural life; to give a knowledge of the foundation facts of morphology and physiology on which depend many of the principles of scientific stock breeding and feeding, of veterinary science and of human physiology and hygiene; and above all from an educational standpoint, it aims to train the student's perceptive faculties, to teach him to see, to do and to reason from observed facts.

The laboratories of the department occupy two rooms on the third floor of the administration building. They are well supplied with necessary apparatus including compound and dissecting microscopes, camera lucidas, eyepiece and stage micrometers, an automatic microtome, dissecting sets, dry and steam sterilizers, incubators, reagent sets and numerous smaller articles, all of which are for the use of students.

For the purpose of illustration there are in addition to the general museum and the entomological collection a set of the celebrated Leuchart zoological charts, enlarged dissectable models of the human ear, eye, heart, brain and larynx and a large series of microscopic mounts.

The general museum also contains a small but typical collection of mounted mammal skins; a collection of mounted skins of native birds; a collection of mounted bird skins from Alaska; a collection of more than one hundred species of eggs of native birds; a small collection of fishes and reptiles; a considerable number of marine invertebrates, including a small but beautiful collection of Philippine shells; a small but interesting collection of skulls and disarticulated and articulated skeletons; and the largest collection of Oregon insects in existence.

Course I.—*Invertebrate Zoology*.—Sophomore year; third term. A course devoted principally to the morphology, physiology and ecology of invertebrates. Particular attention is given to the study of the single celled forms since it is believed that the student can thus best gain an insight into the structure and physiological activities of the higher animals. Some of the types studied are the amœba, paramœcium, vorticella, sponge, hydra, starfish, crawfish, earthworm, mussel and grasshopper. Required in the courses in agriculture, household science and pharmacy. Seven hours a week. Laboratory deposit \$3.00.

Course II.—*Entomology*.—Junior year; first term. A study of the structure, classification and habits of insects, with particular reference to those which are beneficial or injurious. Instruction is given in methods of collecting, mounting and studying the life-histories of insects and in the preparation and use of insecticides. Required in the courses in agriculture and household science. Prerequisite, course I. Seven hours a week. Laboratory deposit \$1.00.

Course III.—*Vertebrate Zoology*.—Junior year; second term. A course devoted principally to the morphology and physiology of vertebrates. A careful comparative study is

made by dissections of several vertebrate types, particular attention being given to the Guinea pig as a type of the mammalia. The relation of function to structure is kept constantly in mind throughout the course which thereby becomes valuable as an introduction to the study of human physiology and veterinary science. Required in the courses in agriculture, household science and pharmacy. Seven hours a week. Prerequisite, course I. Laboratory deposit \$3.00.

Course IV.—*Physiology*.—Junior year; third term. A course in human physiology designed for students having a knowledge of general biology and of vertebrate anatomy. The student should also possess some knowledge of chemistry and physics. Required in courses in agriculture, household science and pharmacy. Prerequisites, courses I and III. Five hours a week.

Course V.—*Physiology*.—Junior year; second term. A course in the elements of human anatomy and physiology designed for students with no previous biological training. Text-book, lectures and demonstrations. Martin's Human Body. Required in the course in mechanical engineering. Five hours a week.

Course VI.—(a) *Evolution*.—Senior year; first term. A course of lectures and collateral reading on organic evolution; covering such topics as the evolution of evolution, variation, struggle for existence, heredity, etc. Prerequisites, courses I and III. Two hours a week. Elective.

(b) *Systematic Zoology*.—A discussion of the principles of zoological classification with particular reference to species of economic importance. Prerequisites, courses I and III. Three hours a week. Elective.

(c) *Advanced Entomology*.—A laboratory study of some restricted group of insects, of some particular species of economic importance, or of the insects affecting some particular crop. In this course students have free access to the collections and the library and records of the experiment station. The course extends throughout the year. Prerequisites, courses I and II. Seven hours a week. Elective.

Course VII.—(a) *Histology*.—Senior year; second term. A course of laboratory practice in fixing, hardening, imbedding, sectioning, staining, mounting and studying the tissues of the higher animals. Prerequisites, courses I and III. Seven hours a week. Elective.

(b) *Advanced Entomology*.—A continuation of course VI c.

Course VIII.—(a) *Embryology*.—Senior year; third term. Mainly a laboratory course in the study of the development of the frog and the chick, supplemented by a study of the general facts and principles of embryology. Prerequisites, courses I, III and VII a. Seven hours a week. Elective.

(b) *Advanced Entomology*.—A continuation of courses VI c and VII b. Seven hours a week. Elective.

BOTANY AND HORTICULTURE.

EDWARD R. LAKE, M. S., Professor.

BOTANY.

The aim of the regular course in botany is to give the student such a knowledge of plants as will enable him to intelligently consider the various problems of plant life on the farm, in the field, garden or forest.

The student is taught to observe plants; to become acquainted with them by actual work with them.

The chief features of the work of this department are laboratory and field exercises supplemented by lectures and recitations. Text and reference books are used merely as guides, or for the purpose of furnishing suggestions to the student that he may be enabled to make the field, garden, greenhouse and laboratory work the more effective. The department has a good working equipment for the courses outlined, consisting of an herbarium especially rich in Oregon plants, models, charts, mounted and unmounted plants of the various orders and classes, preserved specimens, and laboratory and field appliances for both regular and special work.

Course I.—*Plant Morphology*.—Freshman year; third term. Laboratory and field exercises, together with recitations. The gross structure of our common flowering plants is the main topic of the term's work, though incidentally germination, growth, fertilization and fructification are considered. Each student is required to collect, mount, label and

classify 25-50 of the common field plants, and 10-25 samples of seeds of native plants. Five hours a week. Laboratory deposit, \$2.50. Gray's Lessons; Coulter's Plants.

Course II.—*Plant Histology*.—Sophomore year; first term. Laboratory work with the dissecting and compound microscopes. The exercises of this course cover the minute structure of the higher plants, together with a brief consideration of the lower forms of plant life. Seven hours a week. Laboratory deposit, \$3.25. Coulter's Plants, Strassburger.

Course III.—*Plant Physiology*.—Junior year; first term. Laboratory exercises and recitations. The subject is considered with special reference to the needs of the agriculturist and horticulturist. The principal part of the discussion is given to those phases of the subject that bear directly upon our cultivated crops. Seven hours a week. Laboratory deposit, \$3.00. Sorauer, Physiology of Plants; McDougal, Plant Physiology.

Course IV.—*Plant Pathology and Hygiene*.—Senior year; first term. Laboratory and field work supplemented by lectures and recitations. The common fungous foes of the cultivated field, orchard and garden crops, together with the means of prevention and remedy are considered at length. Elective. Seven hours a week. References, Lodeman, Weed and Massee.

Course V.—*Forestry*.—Senior year; second term. Forest trees, their care, culture and products. Forest areas and their type trees. Forest planting, preservation, and laws. Pacific Coast forests and their value as wealth producers. Timber trees and their diseases. Elective. Seven hours a week.

Course VI.—*Plant Products*.—Senior year; third term.

Economic plants and their various preparations and uses. History, development, and distribution of the plants that furnish the world with its chief supply of material for food, shelter, clothing, fuel, medicine and the arts. Elective. Seven hours a week.

Course VII.—*Systematic or Cryptogamic Botany*.—Senior year; third term. The work of this course is arranged to meet the needs of those electing it. In the systematic work, the student collects and classifies a hundred or more of the local plants, giving data as regards habitat, and distribution, and prepares a synopsis of the orders considered and species collected. Some time is also devoted to a study of current botanical literature.

In the cryptogamic work, the exercises are confined chiefly to a study of the comparative morphology of the fungi, algæ and other flowerless forms of plant life. Elective. Seven hours a week. Laboratory deposit, \$3.50.

The laboratory deposits in courses I, II, III and IV are required of all students, and are made to cover possible loss and breakage of apparatus used by the individual student. At the close of each term such balance as may remain, (and with carefulness, that would be five-sixths of the deposit) is returned to the student. All deposits are required to be made in advance.

HORTICULTURE.

The work in horticulture is so arranged as to give the student a working knowledge of the principles and practices of modern horticulture, especially applicable to Pacific Coast conditions and requirements.

The experiment station orchard of over two thousand fruit trees, shrubs and vines furnishes ample material for all phases of the work of the several courses.

Course I.—*Plant Propagation*.—Senior year; first term. House and field exercises in seeding, grafting, cutting, layering and budding, together with recitations. Five hours a week. Goff's Principles of Plant Culture.

Course II.—*Plant Culture*.—Senior year; second term. Lectures and recitations on orchard, garden and vineyard fruit crops, including selection of soils, planting, cultivating, pruning, harvesting, storing and marketing. Five hours a week. Bailey's Principles of Fruit Growing.

Course III.—(a) *Plant Evolution and Improvement*.—Senior year; third term. Lectures and recitations covering the various phases of evolution as bearing especially upon our cultivated plants, together with a discussion of the principles and practices of plant breeding, and improvement by selection and cross fertilization. Five hours a week. Bailey's Plant Breeding.

(b) *Landscape Gardening*. Lectures and recitations on the principles of home improvement, plants, their uses and abuses in adorning the grounds of city, suburban and country homes. Students are required to make plans for the improvement of some site selected, showing detail of buildings, walks, drives and the various plantings. Elective in the course in household science. Five hours a week.

ELOCUTION.

HELEN V. CRAWFORD, B. S., Professor.

It is the design of this department to train the students to become intelligent and thoughtful readers. The individuality of the student is of the first importance. He is not made a slave to arbitrary rules, or allowed to become an imitator of his teacher; but he is taught to express his thoughts, convictions and emotions in accordance with his own temperament.

Courses I and II.—*Elocution*.—Freshman year; first and second terms. Analysis and rendering. Voice culture, physical culture. Two hours a week. Fulton and Trueblood.

Course III.—*Elocution*.—Sophomore year; first term. Voice culture, bodily expression, analysis and rendering. Two hours a week. Fulton and Trueblood.

Junior year.—Rhetorical exercises will be required throughout the junior year.

Courses IV, V and VI.—*Advanced Elocution*.—Senior year; first, second and third terms. Voice culture, rhythmic movements, literary analysis and rendering. Elective. Two hours a week. Fulton and Trueblood.

FLORICULTURE AND GARDENING.

GEORGE COOTE, Professor.

Instruction in floriculture is given in the household science course. The student has the opportunity to familiarize himself with the methods of growing many varieties of decorative plants, and thus to become acquainted with their requirements as to temperature, soils and general cultivation.

Course I.—*Floriculture*.—Junior year; second term. Practical instruction is given in the best methods of plant propagation, potting and training.

In addition to the theoretical instruction in the class-room the student also has the advantage of practical instruction in the well equipped greenhouses of the college.

BACTERIOLOGY.

EMILE F. PERNOT, Professor.

Within the last decade bacteria have laid a very strong hold on the thought and imagination of the scientific world, and have come to be looked upon as playing a most important part, not only in the production of disease and in fermentation, but also in many everyday processes hitherto supposed to be dependent on very different causes.

In consequence of this, bacteriology has been raised to the dignity of a science, and its ramifications have become so numerous and wide-spreading that many of the other sciences, and even some of the arts, have been freely pressed into the service of one or the other of its branches.

The study of bacteriology has made great strides both in the pathological and the technical branches of the subject; and just as investigations into the physiology of higher plants gave the first impetus to the establishment of agricultural experiment stations in all countries; so, in like manner, the physiology of fermentation and technical bacteriology have called into existence, within the last few years, a number of stations and laboratories for the development of those branches of industry wherein microörganisms play an important part.

This college has a well equipped bacteriological laboratory for the investigation and study of bacteriological diseases, both animal and vegetable.

The following courses of lectures and laboratory work have

been added to the college curriculum as electives in the senior year.

Course I.—*Bacteriology*.—Senior year; first term. A course in the elements of bacteriology, including lectures, and laboratory practice in sterilizing, making culture media, inoculating and growing cultures, studying cultural characteristics of certain definite species of bacteria, mounting, staining and examining slides, classification.

Course II.—*Dairy Bacteriology*.—Senior year; second term. Study of the bacterial diseases of milk, bacteria in the dairy, study of bacteria in butter making, and in cheese making. Study of yeasts and ferments.

Course III.—*Bacteriology*.—Senior year; third term. Lectures and laboratory work in pathogenic germ diseases of stock and poultry; a study of vaccines, their manufacture and use; of the nitrifying bacteria in leguminous plants; of bacteria in the soil and the bacterial analysis of water.

DRAWING.

FARLEY D. McLOUTH, B. S., Instructor.

Of the five senses, or gateways of knowledge, two, seeing and hearing, belong to the intellectual part of our nature, while the others chiefly supply our animal wants. The sense of seeing is at once the most active, the most comprehensive and the most intellectual of them all. It is the servant of the soul and through it we receive the richest ideas.

The chief aim of the course in drawing is to teach the student to see truly, to obtain quicker perceptions of the natural world and to preserve something of a true image of beautiful things that pass away. Few among us see truly what we see and then only what we have been educated to see. While no teaching can make an artist in the full sense of the word, any more than the study of the forms and methods of poetry can make a poet, yet drawing, as surely as rhetoric, should form a part of a thorough education; for besides the general quickening of perception and the training of the eye to accuracy of sight, it affords the means of noting the forms of objects such as no written descriptions can secure. At its lowest estimate it is an accomplishment perhaps larger in resources of pleasure than any other, while at its highest, it affords a mode of expression second only to language itself.

In considering the study of drawing, its importance is too often lost sight of, and yet it may be safely said that not only is drawing a corner stone in the foundation of an industrial education, but of a scientific education as well.

In engineering courses, for instance, a knowledge of drawing is one of the first requirements.

In the first and second terms of the freshman year the work is confined entirely to outline drawing, realizing that as an aid in other branches of study, careful outline is of more importance than shading. Exactness of outline and accuracy of proportions are the aim.

Course I.—*The Elements of Drawing*.—Freshman year; first term. The work includes the first principles of drawing and of freehand perspective, drawing from simple block casts. Lectures. Three hours a week.

Course II.—*The Elements of Drawing*.—Freshman year; second term. A continuation of course I, drawing from casts. Lectures. Three hours a week.

Course III.—*The Elements of Drawing*.—Freshman year; third term. Everything that is seen in the world around us presents itself to our eyes in an arrangement of spots or patches of different colors variously shaded, or patches of light and shade, and to this course III is shaped making a decided change. To one not having a knowledge of the work, it might seem as though it were carried far to the other extreme, for now we use no outlines at all, but work in patches or spots, and give our attention to areas and values of light and shade. The work is from casts of geometric figures and from simple still-life studies. Lectures. Three hours a week and course II continued two hours a week.

Courses IV, V and VI.—*Advanced Drawing*.—Senior year. Facilities for advanced work are offered as an elective throughout the senior year. The work includes still-life, cast drawing, carried to the antique and leading to work from life as the pupil exhibits ability. Lectures. Five hours a week.

MILITARY.

MAJOR FRANK E. EDWARDS, O. N. G., Commandant.

The object of this department is so to instruct the cadet that upon graduation he will be thoroughly competent to hold a commission as a company officer in the national guard or volunteer army. Military drill improves the habits and manners of the student, develops him physically and gives him that military knowledge which it is desirable every citizen should possess that he may render intelligent aid to his country or state in time of need. It cultivates a manly spirit, ready and implicit obedience, respect for authority and self-restraint—all qualities of inestimable value to a young man.

Instruction in the course is prescribed for all undergraduate male students. All claims for excuses from military duties on the ground of physical disability will be referred to the physical director. Students excused from active military work may be assigned some light duty by the head of the department. The instruction is both practical and theoretical.

The battalion band, with twenty instruments, is under the instruction of a competent cadet officer as leader. Cadets of the band who wish to furnish their own instruments will receive a reasonable rental for the same from the college. Ordinarily no cadet will be assigned to the band until he is well instructed in the "school of the soldier" and the "school of the company."

The armory contains a drill room 70 x 120 feet in extent, an office and recitation room, and suitable rooms for storing guns and other ordnance. Two hundred Springfield cadet rifles with equipments, two light artillery field pieces, and a liberal allowance of blank and ball cartridges are furnished by the ordnance department, U. S. army. The college has purchased the necessary band instruments, swords, bugles, colors, and signal apparatus for the thorough equipment of the department.

It is the intention to hold an encampment for two or three days annually when suitable camp equipage can be secured. The first annual encampment was held in June, 1900.

The commissioned officers are selected from the senior class, the non-commissioned officers from the senior, junior and sophomore classes. Appointment of officers and non-commissioned officers, and their relative rank, is determined according to the military standing of cadets based upon a careful consideration of the following points: (1) Knowledge of drill and duties as determined by examination, practical application and recommendations of superior officers; (2) zeal, soldierly bearing and aptitude for command; (3) character; (4) military record; (5) general standing in the college.

Cadets are required to wear a uniform at all drills and other military exercises. This uniform costs about \$16.50. It is of dark blue cloth of an excellent quality and makes a very neat and serviceable school suit.

Courses I, II, III, IV, V, VI, VIII, IX, XI, XII, XIV, and XVI.—*Military Drill*.—Freshman, sophomore, junior and senior years. The practical course in infantry includes the schools of the soldier, company and battalion, in close and extended order; ceremonies; guard and outpost duty;

target practice and battle tactics. In artillery it includes the schools of the soldier, cannoneer and platoon, dismounted; the mechanism, nomenclature and care of the 3.2 inch breech-loading field pieces; the use of artillery in the field.

Those physically unable to bear arms, together with a limited number from the senior and junior classmen, are assigned to the signal corps, and are instructed in the usual methods employed in military signaling.

Courses VII, X, XIII and XV.—*Military Science*.—Junior and senior years. The theoretical course embraces recitations in U. S. infantry and light artillery drill regulations, and outpost and guard duty manuals; instruction in reports and returns pertaining to a company; lectures on organization and administration of the U. S. army in peace and war; the volunteers and militia; tactics, strategy and logistics, and other military subjects.

U. S. Infantry Drill Regulations; Blunt's Small Arms Firing Regulations; U. S. Light Artillery Drill Regulations; Gidding's Manual of Signaling; Burnham's Duties of Outposts and Manual of Guard Duty; Wagner's Elements of Military Science.

ROSTER.

Cadet Officers and Non-Commissioned Officers.

STAFF AND NON-COMMISSIONED STAFF.

R. T. Withycombe.....	First Lieutenant and Adjutant
I. C. Brown.....	First Lieutenant and Quartermaster
C. F. Hawley	Sergeant Major
W. S. Junkin.....	Quartermaster Sergeant

COLORS.

W. E. Hanley	Color Sergeant
A. M. Alspaugh.....	Color Corporal
R. Billings.....	Color Corporal

BAND AND FIELD MUSIC.

E. W. Redd.....	First Lieutenant and Leader
A. B. Bowers.....	Drum Major
F. L. Colvig.....	Chief Bugler
J. W. Wiley.....	Sergeant
H. Martin.....	Sergeant
H. S. Wood.....	Sergeant
F. Steiwer.....	Corporal
J. D. Zurcher.....	Corporal
W. H. Wicks.....	Corporal
H. E. Dupuy.....	Corporal
E. W. Yates.....	Bugler
C. H. Woodcock.....	Bugler

SIGNAL CORPS.

B. Mayfield.....	Signal Sergeant
E. Rosendorf.....	Signal Corporal

ARTILLERY.

M. F. Bridgess.....	First Lieutenant
W. B. Hillman.....	First Sergeant
J. E. Smith.....	Sergeant
G. H. Thompson.....	Sergeant
E. P. Jackson.....	Gunner Corporal
C. H. Roake.....	Gunner Corporal

INFANTRY.

"A" COMPANY.	"B" COMPANY.	"C" COMPANY.
<i>Captain:</i> A. Campbell.	<i>Captain:</i> M. C. Williams.	<i>Captain:</i> S. D. Herbert.
<i>Lieutenants:</i> F. S. Ward, W. L. Pate.	<i>Lieutenants:</i> W. L. Sharp, J. F. Scott.	<i>Lieutenants:</i> E. R. Shepard, L. J. Kraps.
<i>Sergeants:</i> A. E. Tully, C. W. Laughlin, M. L. Johnson, L. G. Mattley, F. C. Houston.	<i>Sergeants:</i> J. W. Hartley, L. F. Millhollen, H. L. Lusted, V. C. Spencer, A. E. McGillivray.	<i>Sergeants:</i> H. V. Tarter, T. Bilyeu, L. E. Kurtichanof, N. W. Leadbetter, D. A. Fruit.
<i>Corporals:</i> R. S. Howard, R. Lane, J. E. Johnson, E. K. Bartmess, A. Starr, F. Carnahan.	<i>Corporals:</i> W. Van Groos, B. G. Wills, M. W. Bartmess, A. D. Gerking, F. M. Dempsey, E. E. Baxter.	<i>Corporals:</i> W. S. Wells, E. Beaty, J. B. Standlee, J. Howard, H. C. Brodie, J. N. Gearhart.

PHYSICAL CULTURE.

J. B. PATTERSON, A. B., Physical Director.

The aim of this department is to secure and maintain perfect health. To this end we strive to develop a symmetrical and graceful body. No pretense is made at developing actors, and no one is required to do what is known as "heavy work." However, there are always classes and special teams in various lines of artistic gymnastics, and those enjoying the work are welcome.

The chief aim is to benefit the weak and to guard against developing any tendencies to weakness or disease that so often exist. To this end every man entering the department is given a rigid physical examination. In these examinations the exact condition of the man is noted and special exercises are prescribed to meet his particular case. Records are kept making it possible by later examinations to note results of work and progress made.

The work is largely selected from the German and Swedish systems of gymnastics. A progressive course is followed. The class work is carefully planned and aims primarily to cure the common physical defects, such as narrow chest, stooping shoulders and weakened muscular system.

The gymnasium is well equipped for thorough work. The basement is provided with lockers and bath rooms for both men and women. The main floor is equipped with horizontal bar, parallel bars, buck, horse, rings, ladders, trapeze, dumb-bells, clubs, wands and other apparatus. East of the gymnasium is a large athletic field, with a quarter-mile track, 100-yard straight-away track, tennis courts and baseball grounds.

BUSINESS.

T. H. CRAWFORD, A. M., Professor.

HELEN L. HOLGATE, B. H. E., Instructor.

Two years' work in bookkeeping required. Students may begin this study only at the beginning of either term. Commercial law will be taught from a text-book and also by lectures from members of the bar. The full work must be taken by those matriculating in this course. Those who have done any of the work required, either at this college or elsewhere, will receive credit for the same when satisfactory evidence of that fact has been submitted. This course does not lead to any degree but to a diploma or certificate only. No fee will be charged except for rental of the typewriters.

THE EXPERIMENT STATION.

The station bears an important relation to the college, as the scientific investigations conducted at the station strongly support the instruction given in the class-room. Aside from the original investigations of an economic significance to agriculture, the work of the station affords daily object lessons in good modern farming.

About one hundred acres of the college farm are devoted to scientific and experimental farming. Animal husbandry is an important feature of station work. For this branch of the work Shorthorn and Jersey cattle, Cotswold and Shropshire sheep, and Berkshire swine are maintained. Among these, animals can be found of rare individual excellence, thus offering to the student in agriculture an opportunity to study the highest types of the respective breeds.

Extensive field trials are made in the growing of many varieties of cereals, grasses and forage plants, which are utilized in various feeding experiments conducted for the purpose of determining their value as stock foods. This work embraces the study of plant environment and the correlated subject of animal nutrition, thus supporting in a practical manner the science of agriculture as taught in the college.

Dairying is also a prominent feature of the station work. For this purpose a herd of typical dairy cows and a well equipped creamery are maintained. Many problems of vital interest to practical dairymen are constantly being worked out along the lines of rations for cows and methods for handling the herd. The student himself frequently assists in the work and thus obtains tangible evidence of the practical utility of the sciences in dairy husbandry.

The horticultural work of the station affords the student an admirable opportunity for comparing the work of the class room with the practices of the field. Plant breeding, cross pollination of fruits, as well as modern methods of planting, pruning, grafting, spraying and cultivation are all brought immediately under the observation of the student, thus affording him an excellent opportunity to become thoroughly conversant with the science and practice of horticulture.

SHORT COURSE.

This course is designed to meet the requirements of a large number of men and women in the state who have not the time or the means to take a full college course, and yet are desirous of obtaining a better equipment for their life-work than they now possess.

The course is given in the winter, for at this season the time can be better spared from the farm and orchard than at any other period. While the time will be subject to change to fit the regular college work, yet the course will be arranged to begin about the second week in January of each year, and extend over a period of from four to six weeks.

No special preparation is necessary as the instruction will be given by lectures and laboratory work. No examination is required to enter the course and no textbooks are used. It is the aim of this course to give to the student the largest possible amount of practical information regarding the various phases of agriculture and horticulture. Special attention is given to practical dairying.

The institution is well equipped for work in these lines. Laboratories, dairy building, green houses, and farm, all afford efficient means for illustration and work.

In addition to the course outlined, there are provided special lectures by practical men who have achieved success in some particular branch of agriculture or horticulture, or some other important industry of the state. These special lectures are provided without extra cost to the student, and are highly instructive and beneficial.

No tuition fee will be charged in this course. Those who attend will be expected to secure boarding places in the city or in the boarding halls of the college, provided the latter are not fully occupied by regular college students.

Reduced fare on all railroads in the state will be secured for those who attend this course.

For further information regarding this course application should be made to the president of the institution, or to the vice-director.

FARMERS' INSTITUTES.

One of the most useful methods of diffusing agricultural education is the farmers' institute. These institutes are especially helpful both to the farmer and the experiment station worker. The former secures scientific information upon topics of immediate interest to him and is instructed in its practical application to the farm; while the latter is brought to realize more vividly the needs and perplexities of the farmer. It is gratifying to note the growing demand for more of these institutes, and while the station is ever ready to accede to these demands, it is, however, becoming annually more difficult on the part of the station officials to fulfill these obligations, owing to the constant increase in the work of the station.

LIBRARY.

ARTHUR J. STIMPSON, B. S., Librarian.

The library occupies a large, well-lighted room on the first floor of the administration building, and contains nearly 3000 bound volumes of standard works on history, literature, arts, sciences, general subjects and fiction; as many more bound volumes of U. S. government publications and about 5000 pamphlets and bulletins. Care has been exercised in the selection of books in order that each department may have proper works of reference at the disposal of the student.

A card catalogue is used and the books are indexed according to subject by the decimal system, and alphabetically according to title and author, so that the use of the library is greatly facilitated and its resources upon any subject easily ascertained.

The library receives the leading literary and scientific magazines and journals, all of which are kept on file.

The library is open for the issuing of books every school-day from 8 a. m. to 5 p. m., and during that time the librarian is in constant attendance. Books, excepting cyclopedias and works of general reference, may be drawn out by students for a period not exceeding two weeks.

COURSE OF LECTURES.

In addition to the regular lectures given by the instructors of the college in their respective departments, there will be offered this year a course of popular lectures free to all students. These lectures, which will be given at convenient intervals throughout the year, will bring young people in contact with leaders in various lines of thought; arouse investigation on current topics; stimulate students to emulate the achievements of specialists; give greater breadth of scholarship to the student; and aid in developing the character of the institution.

The opening lecture of the season will be given by Hon. D. Solis Cohen, of Portland, Friday evening, September 20th, at which time there will be an informal reunion of the students, faculty and citizens of Corvallis. Rabbi Stephen S. Wise, of Beth-Israel Congregation of Portland, will lecture October 16th; Mr. Charles H. Markham, of Portland, November 8th; Judge C. A. Johns, of Baker City, December 6th; Mr. Ernest Bross, Managing Editor "Oregonian," Portland, Oregon, December 20. Lecture dates following the Christmas holidays will be timely announced.

LIST OF EXAMINERS.

The graduates of this institution, whose names appear below, have consented to conduct entrance examinations for applicants residing in their respective counties or districts:

Hon. J. K. Weatherford, Albany, Oregon.
Superintendent George Denman, for Benton County.
Austin T. Buxton, Forest Grove.
G. W. Palmer, Baker City.
William F. Keady, P. O. Box 818, Portland.
Effie Willis, Marshfield.
Lena Willis, Roseburg.
Arthur C. Lewis, Klamath Falls.
Rose Horton, Bridal Veil.
Prof. W. W. Bristow, McMinnville.
D. P. Adamson, Prineville.
Lyle Lawrence, Oregon City.

LIST OF STUDENTS.

GRADUATES.

NAME.	COURSE.	POSTOFFICE.	COUNTY.
Denman, Anna M.....	B. L.	Corvallis	Benton.
Fuller, Lelah Inez.....	B. S.	Corvallis.	Benton.
Garrow, Joseph.....	B. S.	McCloud, California.	
Groves, Edna.	B. S.	Corvallis	Benton.
Hershner, Joyce Lillian	B. S.	Corvallis	Benton.
Johnson, William Thomas.....	B. S. A.	Corvallis.....	Benton.
Junkin, Herbert Eugene.....	B. S.	Corvallis	Benton.
Linville, Mildred.....	B.H.E.	Corvallis	Benton.
Woodcock, Arthur Roy.....	B. S.	Corvallis	Benton.

SENIORS.

NAMES.	COURSE.	POSTOFFICE.	COUNTY.
Brown, Ivan Corlas.....	Agri.	Hockinson	Wash. State.
Burton, Ivy Grace	H. S.	Independence ..	Polk.
Campbell, Alfred	Mech.	Ballston	Polk.
Campbell, Henrietta	H. S.	Ballston.	Polk.
Colvig, Fred Le Roy.....	Phar.	Grants Pass.....	Josephine.
Danneman, Carrie Agnes.....	H. S.	Clem.....	Gilliam.
Davis, Cora Mabel.....	Phar.	Corvallis	Benton.
Davis, Eugene Harold.....	Mech.	Corvallis	Benton.
Herbert, Myrtle Vine.. ..	H. S.	Corvallis	Benton.
Herbert, Stanley Darle.....	Mech.	Corvallis	Benton.
Hillman, William Bennett....	Mech.	Corvallis	Benton.
Holden, Esther Blanche.....	Phar.	Oregon City	Clackamas.
Hoover, Lizzie.....	H. S.	Fossil	Wheeler.
Hoover, Maude.....	H. S.	Fossil	Wheeler.
Horner, Charles Herbert.....	Agri.	Salem	Marion.
Johnson, Martin Luther.....	Mech.	Portland	Multnomah.
Jones, Mabel Lenore.....	H. S.	Brooks	Marion.
Junkin, William Sumner	Agri.	Corvallis.	Benton.
Kraps, Leo J.....	Mech.	Salem	Marion.
Kyle, Ethel Blond.....	H. S.	Corvallis	Benton.
Michael, Bessie Lea.....	H. S.	Corvallis	Benton.
Michael, Grace.....	H. S.	Corvallis	Benton.
Pate, William L.....	Mech.	Jefferson	Marion.
Redd, Ernest Winfield.....	Phar.	Carlton	Yamhill.
Riddle, Blanche Eglantine....	H. S.	Riddle	Douglas.

Rusk, Emma Imogen.....	H. S.	Milwaukie	Clackamas.
Scott, James Franklin.....	Mech.	Tangent.....	Linn.
Shepard, Edgar Raymond....	Mech.	Zena	Polk.
Smith, Besse Gertrude.....	H. S.	Salem.....	Marion.
Stalker, John Louis.....	Phar.	Carson.....	Union.
Stump, Fred Newton.....	Agri.	Salem.....	Marion.
Ward, Frank S.....	Phar.	Plainview	Linn.
Wiley, John Thomas.....	Mech.	Myrtle Creek ...	Douglas.
Williams, Marcus Clyde.....	Phar.	Airlie	Polk.
Wilson, Flora.....	H. S.	Canyonville	Douglas.
Withycombe, Mabel.	H. S.	Corvallis	Benton.
Withycombe, Robert.....	Agri.	Corvallis.....	Benton.

JUNIORS.

NAMES.	COURSE.	POSTOFFICE.	COUNTY.
Allen, Ina Pearl.....	H. S.	Amity	Yamhill.
Alspaugh, Augustus Marshall	Elec.	Eagle Creek.....	Clackamas.
Applegate, Rachel.....	H. S.	Yoncalla	Douglas.
Barnhart, Clarence Ray.....	Agri.	Corvallis	Benton.
Belknap, Frances Edna.....	H. S.	Corvallis	Benton.
Billings, Ralph	Agri.	Ashland.....	Jackson.
Bilyeu, Thomas.....	Mech.	Athens	Umatilla.
Bridgess, Marion Forrest.....	Elec.	Hillsboro.....	Washington.
Ewing, Gertrude Elizabeth...	H. S.	Fulton	Multnomah.
Fruit, Dick Alic.	Mech.	Peoria.....	Linn.
Garret, Rena Jane.....	H. S.	Corvallis	Benton.
Hanley, Wilfred Edmond.....	Agri.	Hillsboro.....	Washington.
Hartley, James W.....	Phar.	Lorane	Lane.
Hawley, Charles Francis.....	Elec.	Corvallis	Benton.
Horning, Alice Odalite.....	H. S.	Silver Lake.....	Lake.
Houston, Fred Chancey.....	Agri.	Mohawk	Lane.
Howard, Roy R.....	Mech.	Prineville.....	Crook.
Howard, Edith Slayton.....	H. S.	Prineville	Crook.
Kurtichanof, Leonard.....	Elec.	Chitwood.....	Lincoln.
Lanka, Robert.....	Mining	Corvallis	Benton.
Laughlin, Chester Willis ...	Mech.	North Yamhill..	Yamhill.
Leadbetter, Noble William...	Mech.	Corvallis.....	Benton.
Lusted, Harry Linden.....	Mech.	Troutdale.....	Multnomah.
Martin, Harold.....	Mech.	Corvallis.....	Benton.
Mattley, Leroy Garfield..	Agri.	Corvallis	Benton.
Mattley, Maud.....	H. S.	Corvallis	Benton.
Miner, Christal.	H. S.	Corvallis	Benton.
Riddle, Claude Abner.....	Elec.	Riddle	Douglas.
Rosendorf, Edward	Phar.	Corvallis..	Benton.
Sharp, Walter Linzy.....	Elec.	Corvallis	Benton.
Small, Malinda Alice.....	H. S.	Silver Lake.....	Lake.

LIST OF STUDENTS.

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Smith, John Eliphalet	Agri.	Amity	Polk.
Spencer, Victor Cleveland. ...	Phar.	Corvallis	Benton.
Standlee, John Biggs	S. Phar.	Corvallis	Benton.
Starr, Artie	Elec.	Monroe	Benton.
Steiwier, Fred	Mech.	Jefferson	Marion.
St. Germain, Elizabeth Ney ...	H. S.	Corvallis	Benton.
Sturgeon, Maude	Phar.	Tillamook	Tillamook.
Tartar, Herman Vance	Agri.	Corvallis	Benton.
Tulley, Arthur Edgar	Agri.	Wallowa	Wallowa.
Van Groos, William	Agri.	Corvallis	Benton.
Wittschen, Virgene Electa ...	H. S.	Turner	Marion.

SOPHOMORES.

NAME.	COURSE.	POSTOFFICE.	COUNTY.
Anderson, Claudia Leola	H. S.	Lents	Multnomah.
Barnhart, Charles	Mech.	Corvallis	Benton.
Bartmess, Meigs William	Mech.	Hood River	Wasco.
Bartmess, Earl Kumler	Mech.	Hood River	Wasco.
Baxter, Elmer Elbert	Mech.	Dayton	Yamhill.
Beaty, Edward	Mech.	Ballston	Polk.
Berthold, Edith Jane	H. S.	Corvallis	Benton.
Bogue, Floyd Ellis	Mech.	Corvallis	Benton.
Brodie, Horace Carpenter	Mech.	Portland	Multnomah.
Canfield, Elsie May	H. S.	La Fayette	Yamhill.
Carnahan, Frank	Agri.	Astoria	Clatsop.
Chipman, Laura Lillian	H. S.	Corvallis	Benton.
Chipman, Rosamond Leolene	H. S.	Corvallis	Benton.
Clark, Percy Elmo	Phar.	Corvallis	Benton.
Cummings, Sibyl Alice	H. S.	Shaw	Marion.
Danilson, Frank	Mech.	Ontario	Malheur.
Davidson, Barton Green	Mech.	Hood River	Wasco.
Dempsey, Fred Marion	Phar.	Portland	Multnomah.
Dixon, Sadie M	H. S.	Corvallis	Benton.
Dupuy, Harry Edward	Phar.	La Fayette	Yamhill.
Emmett, Bertha A	H. S.	Salem	Marion.
Finley, Ada Eudora	H. S.	Corvallis	Benton.
Fischer, Fred	Mech.	Corvallis	Benton.
Fletcher, William Robert	Agri.	Vancouver	State of Wash.
Gearhart, John Neal	Mech.	Astoria	Clatsop.
Harden, Beulah Basheba	H. S.	Corvallis	Benton.
Hibbs, Edna Mabel	H. S.	Gaston	Washington.
Howard, John	Agri.	Prineville	Crook.
Irvine, Gertrude Edna	H. S.	Corvallis	Benton.
Jamieson, William Daniel	Mech.	Raleigh	Washington.
Johnson, John Edwin	Agri.	Vale	Malheur.
Johnson, Lillian	H. S.	Vale	Malheur.

Johnson, Viola Ethel.....	H. S.	Vale	Malheur.
Keesee, Archie Beulah.....	H. S.	Klamath Falls	Klamath.
Lewis, Cecil.....	Mech.	Astoria	Clatsop.
Lieser, Herbert Clay.....	Phar.	Vancouver	State of Wash.
Linville, Ethel.....	H. S.	Corvallis	Benton.
Locke, Elsie Eyylin.....	Phar.	Corvallis	Benton.
MacLean, Kirby A. H. D. ...	Mech.	Corvallis	Benton.
Mayfield, Byram.....	Phar.	Elgin.....	Union.
McGillivray, Alexander E....	Phar.	Shaw	Marion.
McGillivray, Eliza.....	H. S.	Shaw.....	Marion.
Michael, Effie Laura.....	H. S.	Corvallis	Benton.
Millhollen, Lloyd Francis....	Phar.	Oakville	Linn.
Olson, Kathryn Eunice.....	H. S.	Catlin	State of Wash.
Pate, Frank C.....	Agri.	Jefferson.....	Marion.
Pugh, Harvey Garfield.....	Mech.	Shedd	Linn.
Randall, Julia	Phar.	Corvallis	Benton.
Roake, Chester Happy.....	Mech.	Long Beach.....	California.
Robinson, Clarence C.....	Agri.	Junction City...Lane.	
Robinson, Reuben Hynson...	Mech.	Junction City...Lane.	
Simpson, Margaret Merle.....	H. S.	Corvallis	Benton.
Smith, Robena Jenettie.....	H. S.	Corvallis.....	Benton.
Smith, Ida Mae.....	H. S.	Zena	Polk.
Smith, Ethel Florence.....	Phar.	Salem.....	Marion.
Starr, Mamie C. L.....	H. S.	Monroe	Benton.
Tartar, Lena Belle.....	H. S.	Corvallis	Benton.
Tharp, Zophar.....	Mech.	Sheridan	Yamhill.
Thompson, Edith	H. S.	Corvallis	Benton.
Thompson, George Harris....	Agri.	Pratum.....	Marion.
Thrasher, Frank.....	Mech.	Corvallis	Benton.
Tuttle, Gerald	Phar.	Summerville ...	Union.
Underwood, Irving Melville..	Mech.	Sherar's Bridge.	Wasco.
Weber, Agnes Florence.....	H. S.	Corvallis	Benton.
Wells, Walter Stanley.....	Phar.	Corvallis	Benton.
Westenhiser, Fred Herman...	Agri.	Yoncalla	Douglas.
Whiteman, Grace.....	H. S.	Sidney... ..	Marion.
Wicks, William Hale.....	Agri.	Corvallis	Benton.
Wilson, Bushrod Washington	Mech.	Corvallis	Benton.
Winniford, Walter Asa.....	Agri.	Wren	Benton.
Yates, Elbert W.....	Agri.	Corvallis	Benton.
Yoder, Levi Henry.....	Mech.	Needy	Clackamas.

FRESHMEN.

NAME.	COURSE.	POSTOFFICE.	COUNTY.
Adamson, Albert Wilbert.....	Phar.	Corvallis	Benton.
Alexander, Ethel May.....	H. S.	Corvallis.....	Benton.
Allingham, Pearl.....	H. S.	Shedd.....	Linn.

Allingham, Jessie Ruth.....	H. S.	Shedd.....	Linn.
Allingham, Ralph.....	Agri.	Shedd.....	Linn.
Applegate, Eva.....	H. S.	Yoncalla.....	Douglas.
Applegate, Eva.....	H. S.	Yoncalla.....	Douglas.
Baker, Benjamin Franklin....	Agri.	Oregon City....	Clackamas.
Ball, Alfred Emery.....	Phar.	Ballston	Polk.
*Ball, Ralph Henry.....	Phar.	McCoy.....	Polk.
Bates, Allen.....	Phar.	La Fayette.....	Yamhill.
Beaver, Clarence Warner.....	Phar.	Salem.....	Marion.
Belknap, Arthur Edward.....	Mech.	Corvallis.....	Benton.
Bishop, Laura.....	H. S.	Hood River.....	Wasco.
Blakeslee, Della.....	H. S.	Corvallis	Benton.
Bower, Albert Burton.....	Mech.	Silverton	Marion.
Brooks, Ethel Amelia.....	H. S.	Corvallis	Benton.
Buell, Reva Nellie.....	H. S.	Sheridan	Yamhill.
Burns, John Charles.....	Agri.	Rockwood.....	Multnomah.
Buster, John.....	Phar.	Sheridan	Yamhill.
Byerlee, Carrie Ann.....	H. S.	Hood River.....	Wasco.
Carter, Etta Bell.....	H. S.	Halsey	Linn.
Cate, Claude Clifton.....	Agri.	Lenox.....	Washington
Cathey, George Andrew.....	Phar.	Corvallis	Benton.
Chambers, James Ralph.....	Mech.	King's Valley..	Benton.
Christiani, Charlie Otto.....	Mech.	Prineville.....	Crook.
Clark, Jesse Claude	Agri.	Newberg.....	Yamhill.
Congdon, Ray Fenton.....	Mech.	Blackly..	Lane.
Connor, Charles.....	Mech.	Ione	Morrow.
Cosper, Alma Adella.....	H. S.	Oregon City ..	Clackamas.
Cox, Fletcher.....	Mech.	Forest Grove ..	Washington.
Crume, George W.....	Mech.	Shedd	Linn.
Cummings, Carroll E.....	Agri.	Shaw	Marion.
Cummings, Edward Alfred..	Agri.	Shaw.....	Marion.
Davis, Zella May.....	H. S.	Shedd.....	Linn.
Davis, Floyd Bushnell.....	Mech.	Corvallis	Benton.
DeHaven, Clara Myrtle.....	H. S.	Corvallis	Benton.
Dilley, Lucy Aramintha.....	H. S.	Wren	Benton.
Dunlap, Mary Iva.....	Phar.	Shedd.....	Linn.
Dunlap, William James.....	Mech.	Shedd..	Linn.
Evans, Harry Benton.....	Mech.	Estrup.....	Lane.
Farra, Lester.....	Agri.	New Market....	Missouri State.
Fawk, Seth Lee.....	Mech.	Rickreall.. ..	Polk.
Flett, Lura Lorene.....	H. S.	Corvallis.....	Benton.
Frazier, Earl.....	Phar.	Sheridan.....	Yamhill.
Fream, Clarence Ralph.....	Mech.	Monmouth	Polk.
French, Margaret Isabell.....	H. S.	Corvallis	Benton.
Fryer, Harry Lee.....	Mech.	Carlton.....	Yamhill.
Fuller, Clara Etta.....	H. S.	Corvallis.....	Benton.
Gellatly, David Neal.....	Agri.	Philomath.....	Benton.

Gerking, Albert David.....	Agri.	Corvallis	Benton.
Glover, Homer Clifton.....	Agri.	Eagle Creek	Clackamas.
Gordon, Charles Victor.....	Mining.	White Bird.....	Idaho State.
Gordon, Frank.....	Mech.	Glencoe	Washington.
Groshong, Fred Monroe.....	Agri.	Hoskins,	Benton,
Hagelstein, Henry.....	Mech.	Marshfield	Coos.
Hall, Albert Sidney.....	Mech.	Cleone.....	Multnomah.
Halliday, Wilbur Andrews.....	Agri.	Ontario.....	Malheur.
Harden, Delbert	Mech.	Corvallis	Benton.
Harder, Ralph Frederick.....	Agri.	Melville.....	Clatsop.
Hartley, Sophie Marguerite...	H. S.	Bohemia.....	Lane.
Hartley, Warren Benson.....	Mining.	Bohemia.....	Lane.
Healy, Leonard.....	Mech.	Corvallis.....	Benton.
Henkle, Joseph Clare..	Mech.	Corvallis	Benton.
Henry, Worth W...	Agri.	Zena	Polk.
Hepburn, Arthur Weed...	Mining.	Salem.....	Marion.
Herbert, Violet Philendia.....	H. S.	Corvallis.....	Benton.
Hershner, Edna Blanche.....	Phar.	Corvallis	Benton.
Heston, Arthur Cleveland.....	Agri.	Dundee.....	Yamhill.
Hinrichs, Ernest.....	Mech.	Hood River.....	Wasco.
Hirstel, Dave.....	Mech.	Portland.....	Multnomah.
Holt, Nellie.....	H. S.	Corvallis	Benton.
Horton, Walter Ralph.....	Mech.	Bridal Veil.....	Multnomah.
Horton, Alva Otis.....	Phar.	Bridal Veil.....	Multnomah.
Humphreys, John Andrew.....	Phar.	Canyonville.....	Douglas.
Hunsaker, Ethel Lenore.....	H. S.	Turner	Marion.
Hunsaker, Cressie.....	H. S.	Turner	Marion.
Hussey, Alvaro Staples.....	Phar.	Turner	Marion.
Ingram, Rose Mildred.....	H. S.	Monroe.....	Benton.
Jackson, Claud Alton.....	Mech.	Hillsboro.....	Washington.
Jones, William Robert.....	Agri.	Corvallis	Benton.
Junkin, James Blaine.....	Agri.	Corvallis	Benton.
Junkin, Jonathan Bunyan.....	Mining.	Corvallis	Benton.
Keady, Mabel Bee.....	H. S.	Corvallis	Benton.
Kiger, Effie Ina.....	H. S.	Blodgett.....	Benton.
King, Amos Edward.... ..	Mech.	Portland	Multnomah.
Lage, Ben Herman..	Agri.	Hood River.....	Wasco.
Lindgren, Dora Matilda.	H. S.	Marion	Marion.
Little, David Charles.....	Mech.	Houlton	Columbia.
Loomis, Frank Clark.....	Mech.	Eugene... ..	Lane.
Luttrell, Roy Seaton.....	Agri.	Myrtle Point... ..	Coos.
Mack, Laurence Wallace.....	Mech.	Oregon City ...	Clackamas.
MacLean, Charles Edward.....	Mining.	Corvallis.....	Benton.
Mann, Smith James.....	Mech.	Corvallis.....	Benton.
Marsh, Maude Ethel.....	H. S.	Centerville.....	Washington.
Mattley, Belle Kate.....	H. S.	Corvallis	Benton.
Maxfield, Roy Douglas.....	Mech.	Corvallis	Benton.

LIST OF STUDENTS.

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McAllister, Ottie.....	Phar.	Salem.....	Marion.
McAllister, Mark.....	Mech.	Pratum.....	Marion.
McCollum, William Andrew..	Phar.	Athena.....	Umatilla.
McFarland, Rova Elvira.....	H. S.	Albany.....	Linn.
McGhee, Clyde Harold.....	Mech.	Albany.....	Linn.
McIntyre, Archie Campbell...	Phar.	Athena.....	Umatilla.
McNair, David Nathaniel.....	Mech.	Myrtle Point. ..	Coos.
Meiser, Martin McClure.....	Mech.	Albany	Linn.
Messinger, Charlie Hosea.....	Mech.	Monmouth.....	Polk.
Michaux, Carl Winnifred.....	Phar.	McMinnville ..	Yamhill.
Miller, Chas. Raymond.....	Mech.	Elgin.....	Union.
Mitchell, Mabel.....	H. S.	Lyons.	Linn.
Moore, Guy.....	Mech.	Prineville.....	Crook.
Morris, Charles.....	Mech.	Fossil.....	Wheeler.
Neel, Clarence	Mining.	Lone Rock.....	Gilliam.
Newsom, A.	Phar.	Salem	Marion.
Nichols, Sylva Grace....	H. S.	Glenbrook.....	Benton.
Pate, Nellie Lillian.....	H. S.	Jefferson.....	Marion.
Patton, Letha Margaret.....	H. S.	Halsey	Linn.
Paulson, Joseph.....	Mech.	University Park	Multnomah.
Price, Ethel.....	H. S.	King's Valley...	Benton.
Price, Emil Raymond.....	Agri.	Corvallis	Benton.
Race, George Sylvanus.....	Mech.	Salem	Marion.
Robison, Ralph Milton	Mech.	Tacoma.....	Wash. State.
Rose, Pearl Lemuel.....	Mech.	Airlie	Polk.
Rosendorf, Juanita Sadie.....	H. S.	Corvallis	Benton.
Rowland, George Robert.....	Mech.	Corvallis	Benton.
Rusk, Alyce Leena....	Phar.	Milwaukie	Clackamas.
Rusk, Herbert Ruel.....	Mech.	Milwaukie.....	Clackamas.
Rusk, Garfield.....	Mech.	Milwaukie.....	Clackamas.
Schrack, Claud.....	Agri.	Oakville.....	Linn.
Scott, Teroah Winfield.....	Phar.	Carson	Wash. State.
Shearer, Caroline Hamilton...	H. S.	Oakville	Linn.
Shepard, Claiborne Lockley...	Agri.	Zena	Polk.
Simeral, Ray.....	Agri.	Macleay.....	Marion.
Skelton, Nellie V.	Agri.	Mt. Vernon.....	Wash. State.
Smith, May C.	H. S.	Corvallis	Benton.
Smith, Benjamin Trueblood...	Agri.	Liberty ..	Marion.
Smith, Ray Marie.....	H. S.	Salem.....	Marion.
Smith, Willie.....	Phar.	Sheridan	Yamhill.
Sommer, Marguerite.....	H. S.	Scio.....	Linn.
Staats, Cecil	Agri.	Suver	Polk.
Stalker, Robert Garfield.....	Mining.	Half-way	Union.
St. Germain, Inez.....	H. S.	Corvallis	Benton.
Strong, Frank Edward.....	Mech.	Corvallis	Benton.
Sutherland, Mary Elizabeth...	H. S.	Shedd	Linn.
Sutherland, John C.....	Mech.	Shedd	Linn.

Sweek, John M.....	Agri.	Burns.....	Harney.
Tanner, Albert Hallam.....	Mining.	Portland.....	Multnomah.
Teel, Mark.....	Mech.	Echo.....	Umatilla.
Telfer, Grace Marie.....	Phar.	Portland.....	Multnomah.
Thomas, Ruth Esther.....	H. S.	Willows.....	California.
Triplitt, Lewis Richard.....	Phar.	Carlton.....	Yamhill.
Tuggle, Dolph.....	Phar.	Silverton ..	Marion.
Ungerman, Nanna May.....	H. S.	McMinnville ..	Yamhill.
Van Houton, Morrison A.....	Agri.	Cross Keys	Crook.
Van Orsdel, John Pomeroy..	Mech.	Dallas.....	Polk.
Wagner, Howard..	Mech.	Corvallis.....	Benton.
Wann, Fred Erwin.....	Mech.	Waldport	Lincoln.
Ward, Delbert Milton.....	Agri.	Lone Rock	Gilliam.
Weaver, Guy Leonard.....	Agri.	Liberty	Marion.
Weber, Otto Adam.....	Phar.	Corvallis.....	Benton.
Weeks, Wilbur.....	Agri.	Laurance	Marion.
Wells, Perry.....	Mech.	Hood River.....	Wasco.
Welsh, Charles Edward.....	Mech.	Shedd	Lin.
Whitby, Isabel Harris.....	H. S.	Corvallis.....	Benton.
Whitney, Ira Parker.....	Agri.	Chitwood.....	Lincoln.
Wicklund, Elmer Gifford.....	Agri.	Vale.....	Malheur.
Wicks, Florence.....	H. S.	Corvallis.....	Benton.
Wilkes, Marion.....	Mech.	Hillsboro.....	Washington.
Winniford, Florence Ella.....	H. S.	Wren.....	Benton.
Winters, George C.	Agri.	Ballston.....	Polk.
Withycombe, John.....	Mech.	Portland.....	Multnomah.
Wood, Josephine Bertha.....	H. S.	Monmouth	Polk.
Wood, Alvin Leroy.....	Mech.	Corvallis.....	Benton.
Woodcock, Clyde Harold.....	Mech.	Corvallis.....	Benton.
Woods, Joshua Marshall.....	Phar.	Corvallis.....	Benton.
Yates, Bessie.....	H. S.	Corvallis.....	Benton.
Yates, Roy T.....	Agri.	Corvallis.....	Benton.
Yates, Wilber F.....	Agri.	Corvallis.....	Benton.

SUB-FRESHMEN.

NAME.	POSTOFFICE.	COUNTY.
Abraham, William.....	Granger.....	Benton.
Allen, Jasper Ebet.	Junction City.....	Lane.
Bareinger, Ada Lucetta.....	Corvallis	Benton.
Beach, Henry Thomas.....	Glencoe	Washington.
Brown, Elwin.....	Tacoma	Washington State.
Brumfield, Olive Maude.....	Corvallis.....	Benton.
Canfield, Kathleen M.....	La Fayette.....	Yamhill.
Cecil, Homer D.....	Burns	Harney.
Cecil, James Carrol.....	Burns	Harney.
Cooper, George Ernest.....	Corvallis.....	Benton.

LIST OF STUDENTS.

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Cooper, James Abraham.....	Corvallis.....	Benton.
Delaney, James Garfield.....	Mountain Dale.....	Washington.
Fegty, Carl W.....	Watson.....	Malheur.
Hall, Walter Wallace.....	Union.....	Union.
Hays, Maggie Maude.....	Tangent.....	Linn.
Hills, Fred Austin.....	Jasper.....	Lane.
Hobbs, William Earl.....	Lincoln	Polk.
Iorns, Frank Benjamin.....	Lyons.....	Linn.
Jackson, Frank Wesley.....	Glencoe.....	Washington
Kinder, Dock.....	Dayton.....	Washington State.
Kraus, Arthur William.....	Aurora.....	Marion.
Milne, John.....	Hillsboro.....	Washington.
Newton, Cora Lydia.....	Corvallis	Benton.
Rinehart, Clay.....	Summerville.....	Union.
Rice, Ervin....	Rice Hill.....	Douglas.
Scherneckau, Chas. August..	Astoria	Clatsop.
Schoel, Louis.....	Albany.....	Linn.
Schrack, Charles Vernon.....	Oakville.....	Linn.
Sears, George Ralph.....	Walker.....	Lane.
Selig, Minnie Myrtle.....	Myrtle Creek..	Douglas.
Smith, Ralph Edward.....	Salem.....	Marion.
Smith, Ray O.....	Gates... ..	Marion.
Smith, Henry C.....	Prineville.....	Crook.
Stapleton, Roy.....	Salem... ..	Marion.
Stimpson, Hettie Marie.....	Newport.....	Lincoln.
Stimpson, May.....	Newport	Lincoln.
Stokes, William Blanchard..	Oregon City.....	Clackamas.
Story, Ethel Bertha.....	Airlie	Polk.
Sweek, Agnes.....	Burns	Harney.
Sweek, Earl.....	Burns	Harney.
Underwood, William Dean...	Boyd	Wasco.
Watson, Henry Bird.....	Albany.....	Linn.
Wimer, Rosewell Edward.....	Salem.....	Marion.
Witty, John Thomas.....	Elgin	Union.

SPECIAL STUDENTS.

NAME.	POSTOFFICE.	COUNTY.
Alexander, Alice Mary.....	Corvallis.....	Benton.
Ban, Rocks.....	Portland.....	Multnomah.
Barnhart, Clara Avalon.....	Corvallis	Benton.
Becker, John A.....	Junction City	Lane.
Bellinger, Bruce Matlock.....	Woodstock	Multnomah.
Blakeslee, Clara May.....	Corvallis	Benton.
Burnaugh, Samuel Lewie.....	Elgin.....	Union.
Burnett, Bruce.....	Corvallis.....	Benton.
Cockrell, Mabel Gladys.....	Corvallis.....	Benton.

Cockrell, Mortimer Jay.....	Corvallis.....	Benton.
Coppin, Marion.....	Corvallis.....	Benton.
Derby, Arthur N.....	Salem.....	Marion.
Dickey, Walter Thompson....	Hood River.....	Wasco.
Dukes, Maltie.....	Hood River.....	Wasco.
Edwards, Ernest Lee.....	Junction City.....	Lane.
Emerick, Morton Joe.....	Corvallis.....	Benton.
Fields, David Lester.....	Philomath.. ..	Benton.
Gallagher, Frank Roswell....	North Yamhill.....	Yamhill.
Geary, Kathleen.....	Corvallis.....	Benton.
Goldson, George William....	Goldson.....	Lane.
Hilton, Olga.....	Corvallis.....	Benton.
Hudson, William Walter.....	Myrtle Creek.....	Douglas.
Hurlburt, Lucy Maria.....	Arlington	Gilliam.
Jackson, Leona	Corvallis.....	Benton.
Jackson, Elmer Polic.....	Cleon.....	Multnomah.
Lane, Ralph.....	Corvallis.....	Benton.
Malson, Comodore W.....	Shedd.....	Linn.
McAllister, Charles Augustus.	Enterprise.....	Wallowa.
McAllister, Reese Moe.....	La Grande.....	Union.
Mossie, Eber David.....	Ukiah	Umatilla.
Peters, Verna Belle.....	Mist	Columbia.
Phillips, Edgar W.....	Corvallis.....	Benton.
Pitney, Royal Wayland.....	Junction City.....	Lane.
Ramsey, Oliver Perry.....	Portland.....	Multnomah.
Reid, Esther.....	Corvallis.....	Benton.
Rice, Minnie May.....	Rice Hill.....	Douglas.
Robinson, George Graves.....	Corvallis.....	Benton.
Robinson, Martha Elvira.....	Junction City.....	Lane.
Shenefield, Wellington N....	Corvallis.....	Benton.
Small, Blanche.....	Corvallis	Benton.
Smith, Mrs. Herman.....	Corvallis.....	Benton.
Steiwer, Helen.....	Jefferson.....	Marion.
Surface, Emerson Fletcher..	Garfield	Clackamas.
Thompson, Orla.....	Pratum.....	Marion.
Tohl, Herman J.....	Nehalem	Tillamook.
Waller, Clara Henkle	Seattle.....	Washington.
Weber, Eugene.....	Corvallis	Benton.
Wellsher, Ceicle Iola.....	Corvallis	Benton.
Whiteman, Geneatta Addie....	Sidney	Marion.
Williams, Opal.....	Junction City.....	Lane.
Wills, Bert Gipson.....	Portland.....	Multnomah.
Wood, Homer Sperry.....	Arlington.....	Gilliam.
Wright, Walter Scott.....	Yaquina.....	Lincoln.
Wyatt, Minnie Myrtle.....	Corvallis.....	Benton.
Zurcher, James Drummond...	Enterprise.....	Wallowa.

RECAPITULATION.

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RECAPITULATION.

Graduates	9
Seniors.....	37
Juniors	42
Sophomores	72
Freshmen	177
Sub-Freshmen	44
Specials	55
Total.....	436
Number of Counties in Oregon.....	33
Number of Counties represented.....	28

OTHER STATES.

Washington.....	7
California.....	3
Idaho	1
Missouri.....	1
Total.....	12

TERRITORIES.

Alaska.....	1
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FOREIGN COUNTRIES.

Japan.....	1
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RECAPITULATION.

Oregon.....	422
Other states and territories.....	13
Foreign countries	1
Grand total.....	436

COMPARATIVE STATEMENT OF ENROLLMENT.

<i>Year.</i>	<i>Sub-Fresh-men.</i>	<i>Prepar-atory.</i>	<i>Fresh-men.</i>	<i>Sopho-mores.</i>	<i>Juniors</i>	<i>Seniors</i>	<i>Grad-uate Stu-dents.</i>	<i>Special.</i>	<i>Total.</i>
1888-1889.....		36	33	14	14	0	0	0	99
1889-1890.....		67	55	17	6	0	6	0	151
1890-1891.....		76	83	24	15	0	3	0	201
1891-1892.....		86	63	28	19	9	3	0	208
1892-1893.....		98	123	31	18	7	5	0	282
1893-1894.....		36	103	71	21	5	4	0	240
1894-1895.....		47	85	64	52	13	0	0	261
1895-1896.....		80	175	63	54	9	14	2	397
1896-1897.....			157	80	29	17	11	25	317
1897-1898.....			151	75	45	26	15	24	336
1898-1899.....			164	79	30	36	15	14	338
1899-1900.....	42		145	74	40	36	20	48	405
1900-1901.....	44		177	72	42	37	9	55	436

✻ Alumni.

This list will be revised in 1904.

Prof. FRANK E. EDWARDS, '95.....	President, Corvallis.
Mrs. MARY JANE WHITBY, '71.....	Vice President, Corvallis.
Miss ROSE GREFFOZ, '98.....	Secretary, Corvallis.
Prof. JOHN F. FULTON, '92.....	Treasurer, Corvallis.
Abrams, Walter Carle, B. S., 1900.....	Mercantile business, Lincoln, Ore.
Adamson, David P., B. S. A., 1894, B. S., 1895.....	Druggist, Prineville, Ore.
Adamson, James Edward, B. S. A., 1895.....	Postmaster, Mitchell, Ore.
Additon, A. Sidney, B. S., 1890.....	Metallurgist, Lillooet, B. C.
Aldrich, Edwin Burton, B. S., 1900.....	Bookkeeper, Fossil, Ore.
Aldrich, John G., B. S., 1899.....	Hotel Clerk, North Yakima, Washington.
*Alexander, T. C., B. S., 1872.....	
Alexander, Joseph F., B. S. A., 1891.....	{ Druggist, (Stewart & Holmes Drug Co.) Seattle, Wash.
Allen, Alonzo W., A. B., 1885.....	Druggist, Cor. 16th and Marshall Sts., Portland, Ore.
Allen, Anna, B. S., 1891.....	Housekeeper, Cor. 16th and Marshall Sts., Portland, Ore.
Allen, Ira, A. B., 1888.....	Grocer, 404 State St., Salem, Ore.
Allen, John F., B. M. E., 1895.....	Pharmacist, 222 N. 16th St., Portland, Ore.
Andrews, Lyman B., B. S. A., 1896.....	Clerk, Y. M. C. A., Portland, Ore.
Andrews, Julia Casto, B. H. E., 1896.....	Milwaukie, Ore.
Applewhite, John C., B. S., 1889.....	Lawyer, Nome, Alaska.
Applewhite, Lee, B. S. A., 1893.....	Physician, St. Louis, Mo.
Arnold, Harry Lee, B. S., 1889.....	Corvallis, Ore.
Arnold, Minnie White, B. S., 1876.....	Asheville, North Carolina.
Atwood, Lulu Lindsay, B. H. E., 1896.....	Housekeeper, Spicer, Ore.
Avery, Clarence, B. S., 1889.....	Lawyer, Bingham, Ore.
Barclay, Ina Iona, B. H. E., 1897.....	Teacher, Bruce, Ore.
Barnett, Louisa Maude, B. H. E., 1896, B. L., 1897.....	Teacher, Oswego, Ore.
Bayley, Lizzie J., A. B., 1884.....	Newport, Ore.
Beach, Wm. Henry, B. S., 1899.....	{ Foreman, Spooling Department Oregon City Woolen Mills, Oregon City, Ore.
Beall, Lee, B. S. A., 1896.....	Druggist, Lakeview, Ore.
Beall, Thomas, B. S. A., 1895.....	Farmer, Central Point, Ore.
Beard, Harry, B. S., 1899.....	Teacher at the Reform School, Salem, Ore.
Becker, Walter H., B. S. A., 1896.....	Hardware and Implement Dealer, Odessa, Wash.
Bier, Arthur Julius, B. S., 1900.....	Corvallis, Ore.
Bodine, Daniel Harvey, B. S., 1898.....	Farmer, Albany, Ore.
Booth, Laura Thompson, B. S., 1878.....	Corvallis, Ore.

* Deceased.

Brandes, Ida Ray, B. L., 1892.....252 11th St., Portland, Ore.
Brewer, Verna Keady, B. H. E., 1895.....228 Hall St., Portland, Ore.
Bristow, Adda M., B. H. E., 1895.....Teacher, McMinnville, Ore.
Brown, Sheldon C., B. S. A., 1896, B. S., 1898..Farmer, Outlook, Yakima Co., Wash.
Brown, Ivan C., B. S., 1901.....Hockinson, Wash.
*Bryson, John R., B. S., 1874.
Buchanan, Andrew, S., B. S., 1885...Druggist, wholesale, 16 East 23d St., N. Y. City.
Buchanan, E. Arthur, B. M. E., 1896.....Farmer, Corvallis, Ore.
Buchanan, John G., B. S., 1889.....Farmer, Inavale, Ore.
*Buchanan, Robert G., B. S., 1889.
Buchanan, R. Alice, B. H. E., 1895.....Inavale, Ore.
Bump, Clarence Lee, B. M. E., 1897.....Teacher, Forest Grove, Ore.
Bump, Mark Bailey, B. S. A., 1894.....Lawyer, Hillsboro, Ore.
Burgess, Reuben Davisson, B. S., 1900.....Medical Student, Marshfield, Ore.
Burkhart, Geo. F., B. S., 1871.....Farmer, Spicer, Ore.
Burnett, Brady, B. S. A., 1893.....Clerk in Census Bureau, Washington, D. C.
Burnett, M. Leona, B. H. S., 1899.....Corvallis, Ore.
Burton, Ivy Grace, B. S., 1901.....Independence, Ore.
Buxton, Austin T., B. M. E., 1895.....Farmer, Forest Grove, Ore.
Buxton, Harry Edward, B. S., 1900.....Wood-working Mechanic, Corvallis, Ore.
Buxton, Minnie Maud, B. S., 1900.....Corvallis, Ore.
Callahan, Ida Burnett, B. S., 1881.....Ass't Prof., English, O. A. C., Corvallis, Ore.
Campbell, Henrietta, B. H. E., 1895.....Nurse, (Professional,) Albany, Ore.
Campbell, Alfred, B. S., 1901.....Ballston, Ore.
Campbell, Henrietta, B. S., 1901.....Ballston, Ore.
Caples, Frederick C., B. S. A., 1895.....Spokane, Wash.
Casto, Edith Lilly, B. H. E., 1896.....Spokane, Wash.
Casto, Ella M., B. H. S., 1899.....Teacher, 269 College Street, Portland, Ore.
Casto, Seth L., B. S. A., 1895.....Express Messenger, Spokane, Wash.
Cauthorn, Franklin, A. M., 1876.....Surgeon, Tucson, Arizona.
Cauthorn, Laura Belle, B. H. S., 1898.....Teacher, Wells, Ore.
Chamberlain, Lucie Brandon, B. H. E., 1895.....Housekeeper, Athena, Ore.
Chandler, Chas. S., B. S. A., 1894, B. S., 1895...Lawyer, 530 Calif. St., San Francisco.
Charman, Elmer Ellsworth, A. B., 1881.....Druggist, Oregon City, Ore.
Charman, T. Leonard, B. S. 1881,..... } Real Estate, and Sec. Board of Water
 } Commissioners, Oregon City, Ore.
*Collins, Benjamin F., B. S., 1886.
Collins, James H., A. B., 1888.....Astoria, Ore.
Colt, Chester Thomas, B. S., 1898...Chemist, Ore. Sugar Factory, Summerville, Ore.
Colt, Cleora Wells, B. H. S., 1899.....Summerville, Ore.
Colvig, Fred Leroy, B. S., 1901.....Grants Pass, Ore.
Cooley, Inez, B. H. E., 1895.....Bakersfield, Calif.
Cooley, John Robert, B. S., 1898.....Sec. Eagle Woolen Mills, Brownsville, Ore.
Cooley, Jessie V. Cox, B. H. S., 1899.....Brownsville, Ore.
*Cooper, Lewis E., B. S. A., 1896.
*Cooper, Robert, B. S., 1887.

* Deceased.

- * Deceased.

Garrow, Wilbur W., B. S., 1900.....Lumberman, McCloud, Calif.
Gellatly, Robert Holmes, B. S., 1899.....Diversified Farming, Philomath, Ore.
Gerkiug, Mary, B. H. E., 1896.....Housekeeper, Pendleton, Ore.
Getty, Fanny, B. H. S., 1899.....Teacher, Empire, Ore.
Gibson, Edith, B. H. S., 1898.....{ Student of Music, New England Con-
servatory of Music, Boston, Mass.
Gibson, James H., B. S., 1894.....Attorney at Law, Corvallis, Ore.
Gilstrap, Wm. J., B. S., 1898.....{ Medical Student, College of Physicians
and Surgeons, San Francisco, Calif.
Glass, Elvin J., B. S., 1878...Section Director, U. S. Weather Bureau, Helena, Mont.
Glass, David H., A. B., 1884.....Merchant, Oregon City, Ore.
Glass, Lillian A., A. B., 1880.....Farmer, Corvallis, Ore.
Goodall, W. Scott, B. S. A., 1893.....Real Estate Agent, La Grande, Ore.
Golden, Robert E., B. M. E., 1897.....{ Sub-Inspector, U. S. Engineer
Service, Marshfield, Ore.
Gould, Ina Vivian, B. H. E., 1894.....Teacher, Spicer, Ore.
Greenburg, Bertha Neugass, A. B., 1882.....2293 Franklin St., San Francisco, Calif.
Greffoz, Hortense Perrine, B. H. E., 1893, B. L., 1895.....Teacher, Corvallis, Ore.
Greffoz, Rosalie Beatrice, B. H. S., 1899.....Printer, Corvallis, Ore.
Grimes, Geo. A., 1874.....Farmer.
Grimm, Edgar E., B. S., 1880.....Lawyer, Nome, Alaska.
Groves, Lillie, A. B., 1888.....Corvallis, Ore.
Groves, Mary E., B. H. S., 1898.....Corvallis, Ore.
Groves, Wm. F., B. M. E., 1897.....Engineer, Corvallis, Ore.
Hall, Wm. W., B. S., 1888.....County Clerk, Salem, Ore.
Hamilton, M. Boyd, B. S., 1890.....{ Physician and Surgeon, 532 Will-
iams Avenue, Portland, Oregon.
Hamilton, Olive L., B. H. E., 1895.....Ass't Postmaster, Corvallis, Ore.
Hannah, Anna S., B. H. E., 1895.....2116 Resort Street, Baker City, Ore.
Harding, Clara Melissa, B. S., 1873.....Housekeeper and Farmer, Corvallis, Ore.
Harris, Frances, B. S., 1886.....Teacher, 560 Hoyt St., Portland, Ore.
Harris, Henrietta, B. S., 1885.....Kindergarten Teacher, 560 Hoyt St., Portland, Ore.
Harris, Scott Edwin, B. S., 1900.....Pharmacist, Elgin, Ore.
Harrison, J. Wallace, B. M. E., 1897.....Railway Postal Clerk, Portland, Ore.
Harrison, Bessie Barker, B. H. E., 1896.....Portland, Ore.
Hartless, Georgia E., B. H. S., 1898.....Corvallis, Ore.
Haenel, Delphena L., B. H. E., 1895.....Teacher, Sublimity, Ore.
Hayward, Leon Louis, B. L., 1892.....Corvallis, Ore.
*Henkle, Fanny, B. S., 1871.
Herbert, Myrtle Vine, B. S., 1901.....Corvallis, Ore.
Herbert, Stanley Darle, B. S., 1901.....Corvallis, Ore.
Herrin, Wm. F., B. S., 1873.....{ Chief Council Southern Pacific Co., Wells-
Fargo & Co. Building, San Francisco, Calif.
Hershner, Joyce L., B. S., 1900.....Teacher, Corvallis, Ore.
Hill, Garlin, B. S., 1900.....Teacher, Wren, Ore.
Hillman, Wm. Bennett, B. S., 1901.....Corvallis, Ore.
Hodes, Minnie L., B. H. E., 1895.....Teacher, Corvallis, Ore.

* Deceased.

Hogue, Nellie M., B. H. E., 1892.....	Student, Stanford Jr. University, Calif.
Holden, Blanche Esther, B. S., 1901.....	Oregon City, Ore.
Holden, Hulda, B. H. S., 1898.....	Teacher, Oregon City, Ore.
Holgate, Harry, B. S., 1886.....	Census Clerk, Washington, D. C.
Holgate, Helen L., B. H. E., 1895.....	Stenog. and Typewriter, O. A. C., Corvallis, Ore.
Holman, W. Frank, B. M. E., 1894, B. S., 1895.....	Farmer, Albany, Ore.
Holman, Wm. H., B. S., 1883.....	Proprietary Medicines, Minneapolis, Minn.
Hoover, Lizzie, B. S., 1901.....	Fossil, Ore.
Hoover, Maud, B. S., 1901.....	Fossil, Ore.
Horner, Charles Herbert, B. S., 1901.....	Salem, Ore.
Horning, Alice, B. S., 1882.....	Prof., Domestic Science, Mesilla Park, New Mexico.
Horton, Rose M., B. L., 1892.....	Teacher, 262 Block I, Pueblo, Colo.
Hovendon, Geo. B., B. S., 1883.....	Farmer, Hubbard, Ore.
Hovendon, Hattie Hanna, B. S., 1880.....	Hubbard, Ore.
Howell, R. Henry, B. S., 1900.....	Corvallis, Ore.
Huffman, Jesse Francis, B. S., 1899.....	Logging, Philomath, Ore.
Hufford, Edwin Joseph, B. S. A., 1897, B. S., 1898.....	{ Law Clerk, 228 Sherman Street, Portland, Ore.
Ireland, Laura Korthauer, B. S., 1887.....	47 Walnut Street, Whatcom, Wash.
Irish, Emma Weber, B. S., 1889.....	267 S. Graciot Street, Mt. Clemens, Mich.
Irvine, Clara, B. S., 1889.....	Teacher, McMinnville, Ore.
Ison, Oscar L., B. S., 1873.....	Baker City, Ore.
Jackson, Meldora, B. S., 1900.....	Corvallis, Ore.
Jacobs, Eda, A. B., 1882.....	Corvallis, Ore.
*Jacobs, Isaac, B. S., 1876.....	
Jacobs, Isador, A. B., 1884.....	Commercial Traveler, Kohn & Co., Portland, Ore.
Jeffries, Samuel T., A. B., 1878.....	Att'y-at-Law, Nome City, Alaska.
Johnson, Charles Leslie, B. S., 1892.....	Instructor, Math., O. A. C., Corvallis, Ore.
Johnson, Lionel Alexander, B. S., 1898.....	News Paper Proprietor, Vale, Ore.
Johnson, Marion R., B. S. A., 1896.....	Stenographer, 1215 E. Taylor St., Portland, Ore.
Johnson, Martin Luther, B. S., 1901.....	635 East 9th St., Portland, Ore.
Johnson, Wm. T., B. S. A., 1897.....	Foreman Hort. Dep't, O. A. C., Corvallis, Ore.
Jones, Mary, B. H. S., 1899.....	Teacher, Corvallis, Ore.
Jones, Mabel Lenore, B. S., 1901.....	Brooks, Ore.
Jones, Thomas A., B. S., 1889.....	Pharmacist, Corvallis, Ore.
Junkin, Herbert E., B. S., 1900.....	Corvallis, Ore.
Junkin, Wm. Sumner, B. S., 1901.....	Corvallis, Ore.
Keady, Wm. F., B. M. E., 1896.....	{ Examiner U. S. Customs, 34 N. Front St., Portland, Ore.
Kelly, Harry W., B. S. A., 1896.....	Teacher, The Dalles, Ore.
Kerr, Emma M. Warrior, B. H. E., 1896.....	Corvallis, Ore.
Kidder, Alice Josephine, B. H. S., 1899, B. S., 1900.....	Teacher, Carlton, Ore.
Kidder, Andrew B., B. S. A., 1895, B. S., 1898.....	Railway Mail Clerk, Portland, Ore.
Kittredge, Herbert, A. M., 1886.....	{ Professor Mathematics, Eastern Oregon State Normal School, Weston, Ore.
Kittredge, Jessie Groves, A. B., 1888.....	Weston, Ore.
Kraps, Leo J., B. S., 1901.....	Salem, Ore.

* Deceased.

* Deceased.

McFarland, Minnie, B. S., 1886.....	Gilroy, Calif.
McIntyre, Frankie J. Cauthorn, B. H. S., 1899.....	Athena, Ore.
McKee, Robert, B. S., 1899	Student, Capital Business College, Salem, Ore.
McKnight, Chas. F., B. S., 1898.....	Lawyer, Marshfield, Ore.
Michael, Bessie Lea, B. S., 1901.....	Clerk, Corvallis, Ore.
Michael, Grace, B. S., 1901.....	Corvallis, Ore.
Moreland, Alice, B. S., 1870.....	Healdsburg, Calif.
Morrison, Archibald David, B. S. A., 1895, B. S., 1896.....	Druggist, Corvallis, Ore.
Morrison, Bertie Linville, B. H. E., 1896.....	Corvallis, Ore.
Morrison, Sarah, E., B. H. S., 1898.....	Teacher, Olympia, Wash.
Murray, Colista, B. H. S., 1898.....	Art student, 3912 Melon St., Philadelphia, Penn.
Murray, Leslie W., B. S., 1899.....	Art student, 3912 Melon St., Philadelphia, Penn.
Nash, Dorothea, B. H. E., 1895.....	Student of Music, London, England.
Nash, Percival, B. S. A., 1893.....	Gold mining, Dawson, Y. T. Canada.
Neugass, Moses S., B. S., 1878	{ West Coast Furniture Manufacturing Co., 432-434 14th Street, San Francisco, Calif.
Newton, Emery Jesse, B. S. A., 1896	Teacher, Corvallis, Ore.
Newton, Janie J., B. H. E., 1895	Millinery, Corvallis Ore.
*Newton, Wm. E., A. B., 1884.	
Noel, Leigh A., B. S., 1900.....	Farmer, Gardner, Ore.
Oren, Lewis W., B. M. E., 1895.....	Teacher, Corvallis, Ore.
Ownbey, Letitia, B. S., 1900.....	Oregon City, Ore.
Owsley, Chas. L., B. M. E., 1896.....	Stockman, La Grande, Ore.
Palmer, Geo. Walter, B. M. E., 1893.....	Jeweler, Baker City, Ore.
Palmer, Jennie Gellatly, B. H. E., 1894.....	1624 Fourth Street, Baker City, Ore.
Palmer, Thomas Edward, B. S., 1900.....	Student, U. of O., Grants Pass, Ore.
Parsons, Franc, B. H. E., 1894.....	Teacher, Mayville, Ore.
Pate, William L., B. S., 1901.....	Jefferson, Ore.
Patterson, Woodson L., B. S., 1899.....	Law Student, Baker City, Ore.
Penland, Hugh Elmer, B. S., 1900.....	{ Student, Amr. School, Osteo- pathy, Kirksville, Missouri.
Phillips, M. Clyde, B. M. E., 1896.....	{ Instructor, Mechanical Drawing and Iron Work, O. A. C., Corvallis, Ore.
Plummer, Geo. L., B. S., 1898.....	Merchant, Elko, Nevada.
Porter, Chas. G., B. M. E., 1896.....	Salesman, Corvallis, Ore.
Porter, Chas. R., B. M. E., 1897.....	Merchant, Grass Valley, Ore.
Porter, Dora P., B. H. S., 1898.....	{ Student, Drexel Institute, 3743 Spruce St., Philadelphia, Pa.
Porter, Ora Spangler, B. H. E., 1893.....	Oregon City, Ore.
Porter, Wm. D., B. S. A., 1895.....	Farmer, Shedd's, Ore.
Powell, Edwina M. Avery, B. H. E., 1896.....	565 16th St., Oakland, Calif.
Powers, Loren Tower, B. S., 1899.....	Farmer, Wallowa, Ore.
*Privett, William Riley, B. S., 1871.	
Purdy, Esther Madeline, B. H. S., 1899	Corvallis, Ore.
Ranney, Lillian Ada, B. S., 1900.....	Corvallis, Ore.
Ray, Gordon C., B. M. E., 1896.....	Grass Valley, Calif.
Ray, Herbert G., A. B., 1884.....	Pharmacist, 3d and Morrison Sts, Portland, Ore.

* Deceased.

Read, Lilly M., B. H. E., 1896.....Teacher, Haystack, Ore.
Redd, Ernest Winfield, B. S., 1901.....Carlton, Ore.
*Rice, Emma Thayer, B. S., 1874.....
Riddle, Blanche Eglington, B. S., 1901.....Riddle, Ore.
Robbins, Annie Lilly, B. S., 1888.....Molalla, Ore.
Robbins, Oliver W., B. S., 1886.....Contractor and Builder, Molalla, Ore.
Rowan, Norman J., B. S. A., 1893..... { Master Mechanic, Empire Min-
ing Company, Geiser, Oregon
Rueter, Elsie Mathilde, B. S., 1900.....Forest Grove, Ore.
Rusk, Emma Imogen, B. S., 1901.....Corvallis, Ore.
Samuels, Anna Grace, B. H. E., 1893.....529 East Mill Street, Portland, Ore.
Saunders, Charles Alfred, B. S., 1900.....Mechanical Engineer, Empire, Ore.
Schmidt, Wm. Henry, B. S. A., 1897.....Hotel Keeper, Roseburg, Ore.
Scoggin, Hubert A., B. S., 1899.....Law student, Corvallis, Ore.
Scott, Richard Winfield, B. S. A., 1892.....Farmer, Inavale, Ore.
Scott, Evelyn Maud Currier, B. H. E., 1894.....Teacher, Inavale, Ore.
Selling, Rose, B. S., 1872.....Corvallis, Ore.
Shepard, Edgar R., B. S., 1901.....Zena, Ore.
Shonkweiler, Myrtle, B. H. S., 1898.....Teacher, Carbon, Calif.
Sibley, Hattie Bronson, B. H. E., 1893.....Dallas, Ore.
Simmons, Esther, V., B. H. E., 1896.....Teacher, Roseburg, Ore.
Slayton, Mary Newton, B. S., 1888.....Farmer, Cottonwood, Idaho.
Small, Chas. E., B. M. E., 1897.....Merchant, Corvallis, Ore.
Smith, Bessie Gertrude, B. S., 1901.....Salem, Ore.
Smith, Etta Agnes, B. S., 1900.....Teacher, Corvallis, Ore.
Smith, Joseph, C., B. S. A., 1896.....Farmer, Suver, Ore.
Smith, Leona, B. H. S., 1899.....Student of Music, St. Helen's Hall, Portland, Ore.
Smith, Nolan R., B. S., 1899.....Engineer, Heating Plant, O. A. C., Corvallis, Ore.
Smith, Samuel P., B. S. A., 1895.....Veterinary Surgeon, Cando, N. Dakota.
Smith, Willard W., B. M. E., 1895, M. S., 1901..... { Physician, 1215 Filbert
St., Philadelphia, Pa.
Soden, Bartholomew T., B. S., 1879.....Merchant, 342 Russell St., Portland, Ore.
Spangler, Martin L., B. M. E., 1896..... { Engineer, American Steel Wire
Company, San Francisco, Calif.
Spencer, Hattie Mary, B. H. S., 1899.....Corvallis, Ore.
Spencer, Nettie, B. S., 1882.....Teacher of English, Davenport College, Lenoir, N. C.
Stalker, John Louis, B. S., 1901.....Carson, Ore.
Starr, John H., B. S., 1891.....Bookkeeper, Monroe, Ore.
Starr, M. Eva, B. S., 1900.....Corvallis, Ore.
Stemmler, Milton O., B. S. A., 1895.....Physician, St. Louis, Mo.
Stewart, Marie Lois, B. S., 1892.....Principal, Brooklyn School, Baker City, Ore.
Stimpson, Arthur J., B. S., 1898.....Librarian, O. A. C., Corvallis, Ore.
Stock, Wm., A. B., 1888.....Pharmacist, Blumauer Drug Co., Portland, Ore.
Storms, Jas. W., B. S. A., 1892.....Kansas.
Stout, Mary E., B. H. E., 1895.....Teacher, Mehama, Ore.
Stovall, Dennis H., B. S., 1898.....Traveling Lecturer, Maccabees, Grants Pass, Ore.
Strange, Gertrude M., B. S., 1888.....Teacher, Oregon City, Ore.

* Deceased.

Strewmeyer, Mary Smith, B. H. E., 1895.....	376 15th Street, Astoria, Ore.
Stump, Fred Newton, B. S., 1901.....	Salem, Ore.
Swann, Lionel L., B. S. A., 1893.....	Attorney at Law, Albany, Ore.
Taylor, Chas. Otis, B. M. E., 1897.....	Farmer, Halsey, Ore.
Taylor, Emmett H., B. S., 1874.....	Dentist, Corvallis, Ore.
Terrell, Ralph W., B. M. E., 1897.....	Clerk, Roseburg, Ore.
Tharp, A. Jesse, B. S., 1898.....	Engineer, Portland, Ore.
Thayer, Nettie Gellatly, B. H. S. 1898.....	Salem, Ore.
Thompson, Addie Allen, B. S., 1876.....	Seattle, Wash.
Thompson, Chas. D., A. B., 1886.....	Teacher, Hood River, Ore.
Thompson, Mollie Fisher, B. S., 1889.....	1730 Los Angeles St., Los Angeles, Calif.
Thompson, Newton A., B. S., 1876.....	{ Manufacturing Pharmacist (Mgr. Northwest { Pharm. Co.), 308 Dexter Ave., Seattle, Wash.
Thornton, Lulu C., B. H. E., 1895.....	Cooking, Oregon City, Ore.
Trask, Josie Moses, B. H. E., 1896.....	Woodburn, Ore.
Valencia, Mary Henderson, B. H. E., 1895.....	354 Pacific Ave., Santa Cruz, Calif.
Van Groos, John Albert, B. S., 1899.....	Ass't in Mathematics, U. of O., Eugene, Ore.
Van Groos, James, B. S., 1899.....	Railway Postal Clerk, 110 E. 14th St., Portland, Ore.
Veatch, Henry H., B. S. A., 1896.....	Hardware Merchant, Cottage Grove, Ore.
Veatch, Katie Buchanan, B. H. E., 1895, B. L., 1896.....	Cottage Grove, Ore.
Veatch, Robert M., B. S., 1870.....	Merchant, Cottage Grove, Ore.
Vincent, Frederick W., B. S., 1878.....	Pendleton, Ore.
Voorhees, Mary C., B. H. E., 1893.....	Woodburn, Ore.
Walters, Fred Cecil, B. S., 1900.....	Sawmilling, Elmira, Ore.
Ward, Frank S., B. S., 1901.....	Plainview, Ore.
Ward, Ida Estella, B. H. E., 1896.....	Teacher, Albany, Ore.
Warren, Mary Woodward, B. S., 1890.....	Farmer, Philomath, Ore.
Weatherford, Jas. K., B. S., 1872.....	Att'y-at-Law, Albany, Ore.
Weaver, Geo. E., B. S., 1898.....	Law Student, 14 Sansome Street, San Francisco.
*Wells, C. Otto, B. S., 1890.....	
Whitby, Mary J., B. S., 1871.....	Farmer, Corvallis, Ore.
*White, Ernest, A. M., 1879.....	
Whitney, Jas. E., B. S., 1885.....	Sec'y Wiley B. Allen Co., 243 Monroe St., Portland, Ore.
Wicks, Alice Lettie, B. H. E., 1894.....	Teacher, Corvallis, Ore.
Wiley, John T., B. S., 1901.....	Myrtle Creek, Ore.
*Wilkins, Jesse, B. S., 1889.....	
Williams, Marcus Clyde, B. S., 1901.....	Airlie, Ore.
Williams, W. Claude, B. M. E., 1895.....	Hardware Salesman, McMinnville, Ore.
Willis, Effie, B. H. E., 1895.....	Teacher, Roseburg, Ore.
Wilson, E. E., B. S., 1889.....	Attorney at Law, Corvallis, Ore.
Wilson, Flora, B. S., 1901.....	Canyonville, Ore.
Wilson, Minnie Augusta, B. H. E., 1896.....	Stenographer, Corvallis, Ore.
Wilson, Robert J., B. S., 1886.....	Surgeon, New York, N. Y.
Winslow, Glenn, B. S., 1900.....	Jeweler, Newberg, Ore.
Withycombe, Mabel, B. S., 1901.....	Corvallis, Ore.
Withycombe, Robert, B. S., 1901.....	Corvallis, Ore.
Wood, Arthur W., B. M. E., 1896.....	California.
Wood, Marion F., B. S. A., 1896.....	Teacher, Corvallis, Ore.
Woodcock, Arthur Roy, B. S., 1899, M. S., 1901.....	Corvallis, Ore.
Wright, Abigail, B. S., 1882.....	Teacher, 167 11th St., Portland, Ore.
Wyatt, Milton A., B. S. A., 1895.....	Farmer, Corvallis, Ore.
Yates, J. Fred., A. B., 1885.....	Attorney at Law, Corvallis, Ore.
Yates, Wm E., A. M., 1880.....	Attorney at Law, Corvallis, Ore.

* Deceased.

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ANNUAL CATALOGUE

OF THE

AGRICULTURAL COLLEGE

OF THE

STATE OF OREGON

FOR

1901-02

AND

ANNOUNCEMENTS FOR 1902-1903

CORVALLIS, OREGON.

AGRICULTURAL COLLEGE PRINTING OFFICE.
GEO. B. KEADY, PRINTER.
1902.

Calendar==1902=1903.

SEPTEMBER.							JANUARY.							MAY.						
S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
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S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.	S.	M.	T.	W.	T.	F.	S.
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CALENDAR.

FIRST TERM.

Entrance Examinations for Freshmen, Friday and Saturday, September 19-20, 1902.

Registration, Monday, September 22, 1902.

Recitations begin Tuesday, September 23, 1902.

Final Examinations, Monday and Tuesday, December 22-23, 1902.

SECOND TERM.

Registration, Monday, January 5, 1903.

Recitations begin Tuesday, January 6, 1903.

Final Examinations, Wednesday and Thursday, March 25-26, 1903.

THIRD TERM.

Registration, Monday, March 30, 1903.

Recitations begin Tuesday, March 31, 1903.

Baccalaureate Sermon, Sunday, June 14, 1903.

Final Examinations, Monday and Tuesday, June 15-16, 1903.

Commencement Day, Wednesday, June 17, 1903.

NOTE.—All absences will be charged from the first recitation of the term. The standings of students will be sent to parents or guardians on application to the President or the Registrar.

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BOARD OF REGENTS
OF THE
OREGON AGRICULTURAL COLLEGE
AND
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 HON. JOHN D. DALY, *Secretary*.....Corvallis.
 HON. B. F. IRVINE, *Treasurer*.....Corvallis.

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 HON. J. H. ACKERMAN, *Supt. of Public Instruction*Salem.
 HON. B. G. LEEDY, *Master of State Grange*.....Tigardville.

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	TERM EXPIRES.
HON. BENTON KILLIN.....	Portland, 1903.
HON. J. M. CHURCH	La Grande, 1903.
HON. JOHN D. OLWELL.....	Central Point, 1903.
HON. WM. E. YATES.....	Corvallis, 1907.
HON. JOHN D. DALY.....	Corvallis, 1907.
HON. B. F. IRVINE.....	Corvallis, 1907.
HON. J. T. APPERSON.....	Parkplace, 1910.
HON. W. P. KEADY.....	Portland, 1910.
HON. J. K. WEATHERFORD.....	Albany, 1910.

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OF THE
BOARD OF REGENTS.

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FINANCE COMMITTEE.

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COLLEGE COMMITTEE.

B. F. Irvine, *Chairman*, W. P. Keady, J. M. Church.

STATION COMMITTEE.

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Professor of Agriculture.

FREDERICK BERCHTOLD, A. M.,
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MARGARET COMSTOCK SNELL, M. D.,
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Professor of German and Instructor in English.

GRANT ADELBERT COVELL, M. E.,
Professor of Mechanics and Mechanical Engineering.

JOHN B. HORNER, A. M., LITT. D., Registrar,
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GORDON VERNON SKELTON, C. E.,
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ARTHUR BURTON CORDLEY, M. S.,
Professor of Zoölogy.

EDWARD RALPH LAKE, M. S.,
Professor of Botany and Horticulture.

ABRAHAM LINCOLN KNISELY, M. S.,
Professor of Chemistry.

HELEN VIRGINIA CRAWFORD, B. S.,
Professor of Elocution.

GEORGE COOTE,
Professor of Floriculture and Gardening.

JOHN FULTON, B. S.,
Professor of Assaying and Assistant Professor of Chemistry.

FACULTY AND INSTRUCTORS.

7

IDA BURNETT CALLAHAN, B. S.,
Assistant Professor of English.

FRED LEROY KENT, B. AGR.,
Assistant Professor of Agriculture and Dairying.

ERNEST CHESNEY HAYWARD, E. E.,
Assistant Professor of Mechanical and Electrical Engineering.

CHARLES LESLIE JOHNSON, B. S.,
Instructor in Mathematics.

EMILE FRANCIS PERNOT,
Professor of Bacteriology.

CLARENCE MELVILLE MCKELLIPS, PH. C.,
Assistant Chemist and Instructor in Pharmacy.

WILLIAM THOMAS SHAW, B. AGR., M. S.,
Instructor in Biology.

MARK CLYDE PHILLIPS, B. M. E.,
Instructor in Mechanical Drawing and Ironwork.

FARLEY DOTY McLOUTH, B. S.,
Director of the Art Department.

DANIEL WILLIAM PRICHARD,
Instructor in Woodwork.

MAJOR FRANK EDWARDS, B. M. E., Commandant,
Military Science and Tactics.

JACOB BRUCE PATTERSON, A. B.,
Physical Director.

MARY SMITH PHILBRICK,
Director of Music.

MARY ELIZABETH AVERY,
Instructor in Sewing.

THOMAS HENRY CRAWFORD, A. M.,
Commerce.

HELEN LUCILE HOLGATE, B. H. E.,
Stenography and Typewriting.

OTHER OFFICERS.

THOMAS HENRY CRAWFORD, A. M.,
Clerk and Purchasing Agent.

LEWIS WARREN OREN, B. M. E.,
Librarian.

GEORGE BRELSFORD KEADY,
Printer.

HELEN LUCILE HOLGATE, B. H. E.,
Stenographer.

WILLIAM THOMAS JOHNSON, B. S. A.,
Assistant Florist and Gardener.

WALTER GEORGE KEADY,
Assistant Printer.

WALTER JAMES KENT,
Foreman of the Farm.

JOHN ANDERSON SPANGLER,
Engineer.

ELLSWORTH ERWIN,
Janitor.

FACULTY COMMITTEES.

ACCREDITED SCHOOLS.—Pernot, Covell, McLouth.

ADVANCED STANDING.—Knisely, Kent, Shaw, Phillips.

ADVISORY COMMITTEE.—Covell, Chamberlin, Horner, Withycombe.

ATHLETICS.—Patterson, Hayward, Shaw, Fulton, McLouth.

DISCIPLINE.—Skelton, Horner, Chamberlin.

EMPLOYMENT.—Coote, Withycombe, Knisely, Edwards.

ENTRANCE EXAMINATIONS.—Dean Chamberlin, Skelton, Berchtold, Johnson, Callahan.

GRADUATES.—Berchtold, Kent, Phillips.

LECTURES AND LITERARY ENTERTAINMENTS.—Helen V. Crawford, Edwards, Horner.

LEGISLATION.—Withycombe, McLouth, Covell.

LIBRARY.—Callahan, Withycombe, Holgate, Horner.

LITERARY SOCIETIES.—Snell, Patterson, McKellips, Pernot.

MASTER'S DEGREE.—Lake, Skelton, Cordley.

MUSIC.—Philbrick, Thomas H. Crawford, Chamberlin, Fulton, Prichard.

PUBLICATIONS.—Horner, Berchtold, Lake, Cordley.

SOCIAL ENTERTAINMENTS.—Cordley, Chamberlin, Kent, Johnson.

TERM SCHEDULES.—Fulton, Horner, Johnson.

THE STATION STAFF.

THOMAS MILTON GATCH, M. A., PH. D.,
President.

JAMES WITHYCOMBE, M. AGR.,
Director and Agriculturist.

ARTHUR BURTON CORDLEY, M. S.,
Entomologist.

EDWARD RALPH LAKE, M. S.,
Botanist and Horticulturist.

GEORGE COOTE,
Florist and Gardener.

ABRAHAM LINCOLN KNISELY, M. S.,
Chemist.

JOHN FULTON, B. S.,
Assistant Chemist.

CLARENCE MELVILLE MCKELLIPS, PH. C.,
Assistant Chemist.

FRED LEROY KENT, B. S., AGR.,
Assistant Agriculturist and Dairy Instructor.

EMILE FRANCIS PERNOT,
Bacteriologist.

THOMAS HENRY CRAWFORD, A. M.,
Clerk and Purchasing Agent.

HELEN LUCILE HOLGATE, B. H. E.,
Stenographer.

Oregon Agricultural College.

HISTORY.

By an act approved by President Lincoln, July 2, 1862, a grant of land was made by the United States to each state in the Union in the amount of thirty thousand acres, or its equivalent, for each Senator and Representative to which the state was entitled by the apportionment of the census of 1860.

The proceeds under this act were to constitute a perpetual fund the principal of which was to remain forever undiminished; but interest arising from said fund in each state, which should avail itself of the benefits of the act, was to be applied inviolably to the support and maintenance of a "College where the leading objects shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such a manner as the legislatures of the states may respectively prescribe, in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life."

Ninety thousand acres of land were apportioned to Oregon, and by an Act approved October 9, 1862, the Legislative Assembly of Oregon accepted the provisions of the congressional law.

In 1868 the legislature appointed three commissioners to locate the land, which was done and the report submitted in 1870.

There were in 1868 no state colleges in Oregon, and the same legislature that provided for the location of the land gave the use of the funds that should arise from the sale of the land to the Corvallis College, in Benton county, an institution of learning under the control of the M. E. Church, South.

None of the land of the land grant having as yet been sold, the legislature made an annual appropriation to support the school until the fund to be derived from the grant should become sufficiently large for that purpose. The amount appropriated, while not large, accomplished the purpose: It kept "the feeble spark from expiring."

In 1885 the church voluntarily relinquished its claim on the funds of the Agricultural College, and the state resumed control vesting the general control of the college in a board of regents, granting full power to that end.

In the summer of 1887 the corner-stone of a brick structure was laid by the Governor of Oregon amid imposing ceremonies. This structure, the new Agricultural College, erected by citizens of Benton county on the Agricultural College farm, was the nucleus around which other buildings soon began to cluster as necessity and growing interests demanded.

For a year or two there was ample room; but like a healthy plant placed in good soil, the institution expanded, until the original thirty-five acres have increased to nearly two hundred, and the first structure now proudly surveys its eight descendants.

THE MORRILL ACT.

On August 30, 1890, "An Act" was passed by Congress "to apply a portion of the proceeds of the public lands to

the more complete endowment and support of the colleges for the benefit of agriculture and the mechanic arts established under the provisions of an act of Congress approved July 2, 1862.

This act provided that in 1890, \$15,000 should be paid to these land grant colleges and that the amount so appropriated should be increased by the sum of \$1,000 annually for ten years, and that thereafter the amount annually appropriated should continue to be \$25,000.

It is provided in this act that this money shall be "applied only to instruction in agriculture, the mechanic arts, the English language and the various branches of mathematical, physical, natural and economic sciences with special reference to their application in the industries of life, and to the facilities for such instruction." But it is provided that "no portion of said moneys shall be applied, directly or indirectly, under any pretense whatever, to the purchase, erection, preservation, or repair of any building or buildings."

THE HATCH ACT.

In addition to the above, this college receives from the United States, under the "Hatch Bill" of 1887, the sum of \$15,000 a year for experimenting in agriculture. With this sum it supports an agricultural experiment station in connection with the college. As this "Hatch Fund" is used entirely for experiment work, it adds nothing to the income available for educational purposes. But the experiment station is valuable to students in agriculture in giving them practical illustration in many agricultural and horticultural processes.

LOCATION.

The State Agricultural College is located at Corvallis, Oregon, near the head of navigation on the Willamette river. The city, as its name indicates, is in the heart of this beautiful valley. To the east, on the distant horizon, may be seen the Cascades, with their snow-capped peaks, while to the west, and near at hand, is the Coast range. Mary's Peak, the tallest in the range, is covered with snow for several months of the year, and, though twenty miles away, adds beauty to the scene.

Corvallis is located on high ground, is healthful, and has not been visited by any dangerous, epidemic diseases. It is accessible by rail from the east, west, north and south.

BUILDINGS AND GROUNDS.

CAMPUS AND FARM.

The college grounds comprise in all 184.32 acres. The campus of 39.57 acres is tastefully laid out and adorned with trees, shrubbery, flower gardens, walks, and drives, and is intended eventually to be ornamented with all the various kinds of trees and shrubs of the State. On the campus are the grounds for military drill, base ball, foot ball, lawn tennis, bicycle track, golf and general athletics. The college farm which is to the west of the administration building, consists of 144.75 acres. The farm is provided with barns, silos, piggery, tool house, implements and stock, sufficient for the purpose of practical instruction in agriculture. One hundred acres of the farm are devoted to a variety of farm crops, grassplots, orchards, berry and vegetable plats, illustrative of the studies and experiments in agriculture and horticulture.

ADMINISTRATION BUILDING.

The administration building stands on a pleasant elevation to the west of Corvallis, and is a large substantial brick structure. This building contains many class rooms, library, chapel, museum, and the offices of the President, Registrar, and Clerk of the College.

AGRICULTURAL HALL.

This building, which will be finished before the opening of the college year, will be the largest and in many respects the finest structure on the campus. It is to be a stone building 85 x 125 feet and three stories high. It will provide the offices of the director of the experiment station, a large assembly hall for agricultural and horticultural meetings, and laboratories and class rooms for the departments of agriculture, chemistry, zoölogy and entomology, botany and horticulture, and bacteriology. On the first floor will be a large stock-judging room and the dairy department; while the attic is to be used as a museum. This building, exclusive of fixtures, is to cost about \$40,000.

ASSAY BUILDING.

The assay building is located to the south of, and quite near, the administration building, and is devoted exclusively to the subjects of assaying and mineralogy. The laboratories in this building are thoroughly equipped for the work in hand.

THE PHARMACY BUILDING

Occupying a position in the northwestern corner of the campus, is a neat two-story frame structure, which affords comfortable and ample accommodations for the teaching of the strictly pharmaceutical branches. Two laboratories and

a lecture room are located upon the first floor, while the upper story is used as a study.

GYMNASIUM AND ARMORY.

South of the mining building may be seen the very substantial structure of the gymnasium and armory, a building 70x120 feet, built of wood and stone. The basement, 12 feet high in the clear, contains the bowling alleys, physical culture rooms for men and women, and the physical director's quarters.

The main hall, which is 20 feet to the under side of the trusses, has an unobstructed floor area of 8000 square feet. It is encircled by a suspended gallery six feet wide. A stage, with dressing rooms for men and women, occupies the east end of the main hall.

This spacious building serves as a drill hall for the cadets, and the classes in physical culture.

HORTICULTURAL BUILDING.

This building stands north of the administration building, and contains a class room and laboratories for the department of floriculture and gardening.

Adjoining this building are spacious greenhouses which contain an extensive and typical collection of florist's plants.

POWER HOUSE.

To the west of the administration building is located the power house, a roomy, one story brick structure containing, in the north wing, one forty-five horse power engine with two electric generators of two hundred light capacity each, which furnish light for all the principal buildings, including the armory and the dormitories, as well as power for mechanical hall. The south wing, with cement floor, is all

one large blacksmith shop containing twenty forges for the use of students taking the mechanical and agricultural courses.

MECHANICAL HALL.

One of the most substantial, as well as elegant, structures on the campus is mechanical hall. With its solid stone walls and galvanized iron roof it is a fine example of modern architecture.

On the first floor are found the machine shops, the printing office, the physical laboratory and various recitation rooms and the office of the professor of mechanical engineering; while the rooms in the upper story are occupied by the departments of art, mathematics and civil engineering, and the classes in wood-working and mechanical drawing.

THE HEATING PLANT.

The heating plant, which has all the latest improved steam-heating appliances, has a capacity sufficient to keep the recitation rooms at a summer temperature on the coldest days. This building is made of brick and stone.

CAUTHORN HALL

Is a large and comfortable building, four stories high, amply provided with hot and cold water, steam heat, and electric lights.

The dining room, kitchen, and club rooms of this building are commodious, pleasant, and well furnished. This dormitory and boarding hall is sufficient to accommodate about one hundred students.

ALPHA HALL.

Is a cheerful and delightful home for the young women students. It is two stories high and contains rooms for

thirty young ladies, besides pleasant reception and music rooms and a commodious dining hall. It is lighted by electricity and provided with excellent water.

STUDENT LIFE.

CAUTHORN HALL.

Cauthorn Hall, commonly known as the Young Men's Hall, was built in 1891, for the use of young men who desire to live economically while attending school and at the same time enjoy the privileges and refining influences of the cultured home. The hall was named in honor of Senator Thomas Cauthorn, a friend and benefactor of the Oregon Agricultural College. The building, which is conveniently located and amply supplied with hot and cold water, bath rooms, steam heat and electric lights is sufficiently large to accommodate one hundred persons. The dining room, kitchen, and club rooms are pleasant and well furnished. Students' rooms are uniformly ten feet wide, and respectively fourteen, seventeen and twenty feet long.

The hall is under the management of Professor and Mrs. J. B. Horner, who conduct it on the co-operative plan.

To become a member of Cauthorn Hall Club it is necessary for the applicant to furnish satisfactory evidence that he does not use tobacco nor profane language, and that his conduct is gentlemanly at all times.

Inasmuch as it has been found practicable to provide a sinking fund for the large supply of wood and other necessities constantly kept on hand, each member of the club is required to have on deposit with the club at the beginning of each fiscal month prior to January, twenty dollars; from January to April, eighteen dollars; after April, fifteen

dollars. The unexpended portion of this fee is returned to the depositor at the close of the school year or at the expiration of his membership.

The average cost of living at Cauthorn Hall, including rent, heat, board, etc., during the past three years has been about \$2.30 per week.

Each student's room is furnished with a table, chairs, a chest with drawers; and each student is supplied with mattress, springs and a bedstead three feet wide and six feet long. The student is expected to furnish four sheets, two pillowcases, blankets, two napkins, quilt, pillow, window-blind 3 x 6½ feet, towels, broom, dustpan, washbowl and pitcher, mirror, comb, brushes, tumblers, carpet or matting, pictures and other ornaments that will make his room comfortable and homelike. He should bring a dictionary and such other books as are used for study, for reference, and for profitable entertainment.

The hall is furnished with a reading room which is supplied by the club with some choice current literature.

Relatives and visiting friends will be charged 15 cents per meal and 20 cents for lodging—tickets for meals and lodging being furnished by the book-keeper.

No reduction will be made during the term, save for prolonged absence caused by sickness, when one-half will be deducted.

Cauthorn Hall will be closed during the winter holidays. For further information send for special circular.

ALPHA HALL.

It is the purpose of those having charge of the hall, to make it a comfortable and happy home for the young ladies, surrounding them with such influences as will, dur-

ing their college course, largely contribute to their welfare and progress.

During the summer vacation, the hall will be thoroughly renovated and improvements made which will add greatly to the convenience and pleasantness, not only of the sleeping apartments, but of the whole house.

The hall is provided with a piano, while the spacious grounds are supplied with tennis courts and croquet sets, for the amusement of the young ladies during hours of recreation.

Each room is furnished with mirror, chest with drawers, bedstead, spring mattress, pillow, two chairs and table. Each student should bring with her, table napkins, towels, bedroom crockery and bedding.

The board will be \$2.50 per week.

Friends visiting students will be charged 15 cents per meal.

Those not willing to observe strictly the two rules of the house—quiet observance of study hours and promptness at all meals—will please not apply for rooms.

SOCIAL LIFE OF THE STUDENTS.

Literary contests are common events, the societies meeting in joint session, with prominent citizens as judges. The Y. M. C. A. and Y. W. C. A. hold their regular sessions at the college every Sunday afternoon. These gatherings aid materially in developing the social and spiritual life of the members. At the beginning of the school year these associations conduct a bureau of information and furnish Y. M. C. A. hand-books gratis to all students. Each year a popular course of lectures free to all students is given, under the direction of the faculty, by distinguished speak-

ers from various parts of the state. Vocal and instrumental music intersperse various features of the college work, so that a student in a career of four years may not leave the institution without the refining influences of this important art. Physical culture is encouraged in every way at the gymnasium and on the training grounds. Bowling, fencing, Indian-club swinging, dumb-bell exercises, foot ball, basket ball, base ball, golf and lawn tennis occupy the spare moments of the students in a happy comingling of all classes. These social affairs, although under the direction of a committee of the faculty, are managed by the students who thereby acquire a training in social life destined to be of great value to them.

Corvallis is pre-eminently a college town noted for social clubs, literary societies, and active churches which vie with each other in friendly interest and hospitality toward our young people. More and more as the institution progresses patrons of the college move hither that they may be with their children and at the same time enjoy the refining influences and cultured society of a college community.

SOCIETIES.

The students maintain several literary societies, four for young ladies and four for young gentlemen. These societies are of a semi-fraternal nature, offering to their members social as well as literary advantages. The exercises consist principally of essays, declamations, debates and music. Public and joint meetings are held by permission of the faculty. Many other features of college life, social and literary, are under their supervision. Students are elected to membership by those already belonging to the societies.

The following is a list of the different societies now in existence:

For young ladies: Sorosis, Pierian, Feronian, Utopian.

For young men: Amicitia, Jeffersonian, Philadelphian, Zetagathian.

The membership of each of these societies is limited to forty. They are all in a flourishing condition.

In March, 1896, the literary societies of the college began the publication of a monthly periodical, the "College Barometer." The enterprise met with marked success, and the paper, controlled entirely by students, now wields a strong influence in all college affairs. During the coming year every effort will be made to improve it and make it of interest not only to those directly connected with the school, but to all who are in touch with literary, scientific and industrial education. The editors will be pleased to receive news of alumni and other persons formerly connected with the college. Brief, pointed notes, accounts of scientific experiments and discoveries, and short, well-written and instructive literary articles are also solicited.

ATHLETIC ASSOCIATION.

The students of the college maintain an athletic association which is governed by the following rules and regulations:

1. The athletic union of the college shall have immediate charge of, and be responsible for, the proper conduct of all athletic games of the college, under the supervision of the athletic committee of the faculty.

2. A candidate for any position on an athletic team, bearing the colors and name of the Oregon Agricultural College, shall be of good moral character and shall not fall below a passing grade in more than one study.

3. No one shall be allowed to represent the Oregon Agricultural College in any public athletic contest, either individually or as a member of any team, unless he can satisfy the athletic committee of the faculty of the Oregon Agricultural College that he is, and intends to be throughout the college year, a *bona fide* member of the college, taking a full year's work.

4. No one who is not a *regular* student in the college, and no *regular* student who has ever played in any intercollegiate contest upon a

class or university team of any other college, shall play upon an Oregon Agricultural College team until he has resided one academic year at the college and passed the regular examinations upon a full year's work.

5. No student shall be allowed to represent the Oregon Agricultural College in any public athletic contest, either individually or as a member of any team, who, either before or since entering the college, shall have engaged for money in any athletic competition, whether for a stake, or a money prize, or a share of the entrance fees or admission money; or who shall have taught or engaged in any athletic exercise or sport as a means of livelihood; or who shall at any time have received for taking part in any athletic sport or contest any pecuniary gain or emolument whatever, direct or indirect, with the single exception that he may have received from the college organization, or from any permanent amateur association of which he was at the time a member, the amount by which the expenses necessarily incurred by him in representing his organization in athletic contests exceeded his ordinary expenses.

6. A committee on athletics, composed of five members of the faculty, shall have general supervision over all athletics of the college.

7. All actions of the athletic union must be referred to this committee for its approval.

8. All trainers employed by the clubs of the college must be of good moral character, and must be approved by the athletic committee.

GOVERNMENT.

The college does not undertake to prescribe in detail either its requirements or prohibitions. Students are met on a plane of mutual regard and helpfulness. Our appeal is to a proper sense of the proprieties of life and the necessity of organization on such a basis.

Established by a government that recognizes no distinction of religious belief, the Oregon Agricultural College seeks neither to promote any creed nor to exclude any; but it will always do everything in its power to promote the religious spirit and life.

Whenever the college life of any student is such that his influence, directly or indirectly, is injurious to the work of the institution, he will be relieved from further attendance at this college.

All absences will be charged from the first recitation of the term.

COURSE OF LECTURES.

In addition to the regular lectures given in the various departments by members of the faculty, a course of lectures by representative men, is delivered at convenient intervals during the year. These lectures bring young people in contact with leaders in the various departments of human endeavor; arouse investigation on current topics; stimulate students to emulate the achievements of specialists; give breadth of scholarship to the student and aid in developing the character of the institution. They rank among the most attractive features of college life and are free to all students.

CONDITIONS OF ADMISSION.

To enter the freshman year the applicant must be at least fifteen years of age, and must be able to pass a satisfactory examination in reading, spelling, geography, arithmetic (written and mental), United States history English grammar, and algebra to quadratics.

ADMISSION FROM OTHER COLLEGES.

Students from other colleges must show a certificate of good standing, or honorable dismissal. Such applicants will receive credit for studies pursued in any college authorized to confer degrees, so far as the two courses are equivalent, upon presenting a certificate of standing from the proper officers.

ADMISSION FROM ACCREDITED SCHOOLS.

Graduates from the following accredited schools will be admitted to the freshman year without examination, provided they have completed algebra to quadratics:

Albany,	La Grande,
Astoria,	Lakeview,
Ashland,	Lebanon,
Baker City,	Marshfield,
Bandon (Major Course),	McMinnville,
Bishop Scott Academy,	Medford,
Burns,	Milton, -
Coquille Collegiate Institute,	Moro,
Corvallis,	North Yamhill,
Cottage Grove,	Oregon City,
Cove,	Ontario,
Elgin,	Parkplace,
Eugene,	Pendleton,
Forest Grove,	Portland,
Fossil,	Prineville,
Garland Academy,	Roseburg,
Grant's Pass,	Salem,
Heppner,	Santiam Academy,
Hillsboro High School,	Silverton,
Hill's Military Academy.	Summerville,
Hood River	The Dalles,
Independence,	Tillamook,
Jacksonville,	Union,
Klamath Falls,	Wasco.
Lafayette High School,	Woodburn.

The above list is subject to annual revision.

Those applicants who have completed a high school course will be given proper credit for work accomplished, upon presenting satisfactory evidence to the head professors of the departments concerned.

ADMISSION UPON CERTIFICATES AND STATEMENTS.

The holder of a certificate or statement signed by the county school board of examiners certifying that at a regular teachers' examination he received a satisfactory grade to entitle him to a teacher's certificate, may be admitted to all the freshman classes except algebra. He may remove such deficiency in algebra upon furnishing the President with a satisfactory statement from a teacher or school superintendent that the applicant is familiar with the sub-

ject of algebra to quadratics; or, upon arrival at the college, he may make good such deficiency by examination or by class recitation.

ADMISSION TO THE SUB-FRESHMAN CLASS.

The course of instruction offered under this head is intended for young people who live at considerable distance from an academy or high school, and are unable to attend such, but have finished the eighth grade in a good public school. No tuition is charged. The work is distributed in the three terms as follows:

SUB-FRESHMAN YEAR.

FIRST TERM.

English Grammar 5.....	English A
English Composition 5	English B
Arithmetic 5.....	Mathematics A
U. S. History 5	History A
Reading 1, 2.	Elocution A
Military Drill 1½, 3 (young men).....	Military A
Physical Culture 1½, 3 (young ladies).....	Physical Culture A

SECOND TERM.

English Grammar 5.....	English C
English Composition 5	English D
Elementary Algebra 5	Mathematics B
U. S. History 5	History B
Elocution 1, 2	Elocution B
Military Drill 1½, 3.....	Military B
Physical Culture 1½, 3.....	Physical Culture B

THIRD TERM.

English Grammar 5.....	English E
English Composition 5.....	English F
Algebra 5.....	Mathematics C
Physical Geography 5.....	Geography A
Elocution 1, 2.....	Elocution C
Military Drill 1½, 3.....	Military C
Physical Culture 1½, 3.....	Physical Culture C

According to a regulation of the board of regents no students may be admitted to this class who come from towns or cities of more than fifteen hundred inhabitants, or from such as are supporting good high schools. To enter this class, students must be fifteen years of age.

ADMISSION OF SPECIAL STUDENTS.

None can be admitted as irregular or special students unless they belong to one of the following classes:

1. Those who desire to devote special attention to music and take at least two lessons a week in our department of music.

2. Those who on account of poor health certified by physicians cannot take a complement of studies.

3. Residents who are heads of families and have household duties to look after.

4. Residents who are engaged in regular business or profession and have time for only one or two studies.

5. Such persons as may be permitted to take special studies by vote of the Faculty at a regular monthly meeting.

SCOPE OF THE INSTITUTION.

The scope of the institution, as now organized, cannot be better stated than in the comprehensive words of the act of Congress defining the duty of this and similar colleges:

“The leading object shall be, without excluding other scientific and classical studies, and including military tactics, to teach such branches of learning as are related to agriculture and the mechanic arts, in such manner as the legislature of the state may prescribe, *in order to promote the liberal and practical education of the industrial classes in the several pursuits and professions of life.*”

Based upon this broadened foundation, the special work of the Oregon Agricultural College is the training of youth in those branches of learning which lie at the foundation of modern industrial pursuits. In accordance with the purposes of its founders, and the terms of its original charter, it aims to give special and prominent attention to agriculture, both theoretical and experimental; but it also pro-

vides "a liberal and practical education" in the leading branches of mathematical, natural and physical sciences, in order to prepare youth "for the several pursuits and professions of life." It has increased its subjects and courses of study, and its teaching and illustrative equipment, to such an extent that now, "without excluding classical studies," its leading object is to teach the various sciences in such a manner as to show their applications in the more important industries, to combine with every branch of instruction such an amount of actual practice in the shop, the field, and the laboratory as will serve to illustrate and apply the theory, but without subordinating it. The course in agriculture, as now arranged, conforms very closely to the recommendations of the *Association of American Agricultural Colleges and Experiment Stations*. The range of work in the various courses is shown, as far as the limits of space will allow, in the following descriptive statements and schedule. It is confidently believed that few institutions in the country furnish opportunities for obtaining advanced scientific education to an equal extent and thoroughness at so moderate a cost and with so many incidental advantages.

DEGREES AND COURSES OF STUDY.

UNDERGRADUATE WORK.

The courses offered at the college are arranged under four general heads—Agriculture, Mechanical and Electrical Engineering, Household Science, Mining, Commerce and Pharmacy—all of which require training in English, mathematics, history, elocution, drawing and such other branches as are requisite to a practical education.

Graduation requires four years of college work; and all

the courses of study lead to the degree of Bachelor of Science. In order that the college may meet the needs of a greater number of people and the students intensify along special lines, much of the work is made elective, as may be seen by reference to the courses of study published elsewhere in this catalogue.

In addition to the above courses provision has been made for courses in Vocal and Instrumental Music, a two-year course in Mining, a two-year course in Commerce, and a short course in Agriculture.

GRADUATE WORK.

That students may be encouraged to continue their college work after graduation, the board of regents has made provision for courses leading to advanced degrees.

ADVANCED DEGREES.

Advanced degrees will be given to graduates of this college, or similar, approved colleges, upon the following conditions:—

An applicant for a higher degree must present himself for examination in one major and at least one minor study. Major and minor courses leading to the degree of Master of Science, to be selected from different departments, approved by the faculty, are provided for in the departments of Agriculture, Botany, Chemistry, Economics, Horticulture, Zoology, Mechanical and Electrical Engineering and Household Science. The minor, at the option of the student, may also be taken from the departments of Mathematics, English History or Modern Languages. The candidate must prepare a thesis, based upon original research, which shall show scholarly acquirements of a high order. This thesis must be printed or typewritten and bound, and two copies of it left in the college library. The candidate must spend at least one academic year, or its equivalent, as a resident student at this college in preparing for this degree.

COURSE IN AGRICULTURE.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
English Composition 5.....	English I
General History 5.....	History I.
* { Freehand Drawing $1\frac{1}{2}$, 3.....	Drawing I.
{ Elocution 1, 2.....	Elocution I.
* Woodwork $2\frac{1}{2}$, 5.....	Shopwork I.
Military Drill 2, 4.....	Military I.

SECOND TERM.

Geometry 5.....	Mathematics IV.
English Composition 5.....	English II.
* General History 5.....	History II.
Elocution 1, 2.....	Elocution II.
Freehand Drawing $1\frac{1}{2}$, 3.....	Drawing II.
Woodwork $2\frac{1}{2}$, 5.....	Shopwork II.
Military Drill 1, 2.....	Military II.
Physical Culture 1, 2.....	Physical Culture I.

THIRD TERM.

Geometry 5.....	Mathematics V.
Composition and Rhetoric 5.....	English III.
Plant Morphology 5, 7.....	Botany I.
Breeds of Stock 5.....	Agriculture I.
* Freehand Drawing $2\frac{1}{2}$, 5.....	Drawing III.
Military Drill $2\frac{1}{2}$, 5.....	Military III

SOPHOMORE YEAR.

FIRST TERM.

Chemistry 5, 7	Chemistry I.
Trigonometry 5	Mathematics VI.
Rhetoric 5	English IV.
* Plant Histology 5, 7	Botany II.
Blacksmithing $1\frac{1}{2}$, 3	Shopwork IV.
Military Drill 2, 4	Military IV.

SECOND TERM.

Physics 5, 7	Physics I.
Chemistry 5, 7	Chemistry II.
Rhetoric 4	English V.
Soils and Manures $2\frac{1}{2}$	Agriculture IV.
Dairying $2\frac{1}{2}$	Agriculture II.
*Blacksmithing $2\frac{1}{2}$, 5	Shopwork V.
Military Drill 1, 2	Military V.
Physical Culture 1, 2	Physical Culture II.

THIRD TERM.

*Physics 5, 7	Physics II
Chemistry 2, 3	Chemistry III.
Chemistry 3, 4	Chemistry XI.
English Literature 5	English VI.
Zoology 5, 7	Zoology I.
Irrigation and Drainage 5	Agriculture III.
Military Drill $2\frac{1}{2}$, 5	Military VI.

JUNIOR YEAR.

FIRST TERM.

English Literature 5.....	English VII
*Entomology 5, 7.....	Zoology II.
Agricultural Chemistry 5.....	Chemistry IV.
Dairying 5.....	Agriculture V.
Military Science 1 $\frac{1}{2}$, 3.....	Military VII.
Military Drill 1.....	Military VIII.

SECOND TERM.

Plant Physiology 5, 7.....	Botany III.
*Literature 5.....	English VIII.
Vertebrate Anatomy 5, 7.....	Zoology III.
Agricultural Chemistry 5.....	Chemistry XXI.
Military Drill 1, 2.....	Military IX.
Military Science 2.....	Military X.

THIRD TERM.

American Literature 5.....	English IX.
*Surveying 5, 7.....	Mathematics X.
†Chemistry 5, 7.....	Chemistry V.
Civics 5.....	Political Science II.
Physiology 5, 7.....	Zoology IV.
Steam Engine 1, 2.....	Mechanics IV.
Military Drill 2 $\frac{1}{2}$, 5.....	Military XI.

† Required of students who elect thesis work in the department of chemistry.

SENIOR YEAR.

FIRST TERM.

Economics 5.....	Political Science I.
Soil Physics 2½.....	Agriculture VII.
Horticulture 2½.....	Horticulture I.
Military Drill 1½, 3.....	Military XII.
Military Science 1.....	Military XIII.

†*Electives.*

German 5, or,.....	German X.
Latin 5.....	Latin X.
Chemistry 5, 7.....	Chemistry V.
Mineralogy 5, 7.....	Chemistry VI.
Forestry.....	Botany VIII.
Kitchen Gardening.....	Gardening I.
Botany 5, 7.....	Botany IV.
Zoology 5, 7.....	Zoology VI.
Bacteriology 5, 7.....	Bacteriology I.
Geology 5.....	Geology I.

SECOND TERM.

Psychology 5.....	Mental Science I.
Soil Physics 2½.....	Agriculture VIII.
Horticulture 2½.....	Horticulture II.
Military Drill 1, 2.....	Military XIV.
Military Science 2.....	Military XV.

†*Electives.*

German 5, or,.....	German XI.
Latin 5.....	Latin XI.
Botany 5, 7.....	Botany V.
Forestry 5.....	Botany IX.
Kitchen Gardening 5.....	Gardening II.
Chemistry 5, 7.....	Chemistry VII.
Zoology 5, 7.....	Zoology VII.
Bacteriology 5, 7.....	Bacteriology II.

Assaying 3, 6.....	Chemistry IX.
Elocution 1, 2.....	Elocution V.

THIRD TERM.

Veterinary Science 5.....	Agriculture IX.
Horticulture 5.....	Horticulture III.
Stock Feeding and Breeding 4.....	Agriculture VI.

† *Electives.*

† Military Drill 2½, 5.....	Military XVI.
American Literature 5.....	English IX.
German 5, or,	German VI.
Latin 5	Latin VI.
Astronomy 5.....	Mathematics XI.
Forestry 5	Botany X.
Kitchen Gardening 5.....	Gardening III.
Agricultural Engineering 5.....	Mathematics XII.
Botany 5, 7.....	Botany VI or VII.
Zoology 5, 7.....	Zoology VIII.
Chemistry 5, 7.....	Chemistry VIII.
Bacteriology 5, 7	Bacteriology III.
Assaying 3, 6.....	Chemistry X.

* Latin or German may be elected instead, but no credit will be given towards graduation for less than the full course of six terms.

† In addition to the required studies seniors must select from the electives a sufficient number of hours to form a full course of 22 hours.

‡ Seniors who accept commissions as cadet officers are required to drill during the third term.

A student may upon obtaining written consent of the heads of departments interested, substitute higher mathematics for any other branch of study.

COURSE IN HOUSEHOLD SCIENCE.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
English Composition 5.....	English I.
General History 5.....	History I.
* { Freehand Drawing 1½, 3.....	Drawing I.
{ Elocution 1, 2.....	Elocution I.
General Hygiene ½, 1.....	Household Science I.
Sewing 2, 4.....	Household Science II.
Physical Culture 1½, 3.....	Physical Culture I.

SECOND TERM.

Geometry 5.....	Mathematics IV.
English Composition 5.....	English II.
* General History 5.....	History II.
Elocution 1, 2.....	Elocution II.
Freehand Drawing 1½, 3.....	Drawing II.
Etiquette ½, 1.....	Household Science III
Sewing 2, 4.....	Household Science IV.
Physical Culture 1½, 3.....	Physical Culture II.

THIRD TERM.

Geometry 5.....	Mathematics V.
Composition and Rhetoric 5.....	English III.
Plant Morphology 5, 7.....	Botany I.
* Freehand Drawing 2½, 5.....	Drawing III.
Sewing 2½, 5.....	Household Science V.
Physical Culture 1½, 3.....	Physical Culture III.

SOPHOMORE YEAR.

FIRST TERM.

Chemistry 5, 7	Chemistry I.
Plant Histology 5, 7	Botany II.
Rhetoric 5	English IV.
Dressmaking 2½, 5	Household Science VI.
Elocution 1, 2	Elocution III.
Physical Culture 1½, 3	Physical Culture IV.
*Trigonometry 5	Mathematics VI.

SECOND TERM.

*Floriculture 5	Floriculture I.
History of Eastern Peoples 5 (half term)	History III.
Floriculture 5 (half term)	Floriculture I.
Chemistry 5, 7	Chemistry II.
Rhetoric 4	English V.
Dressmaking 2½, 5	Household Science VII.
Physical Culture 1½, 3	Physical Culture V.

THIRD TERM.

English Literature 5	English VI.
Zoology 5, 7	Zoology I.
Chemistry 2, 4	Chemistry III
Chemistry 3	Chemistry XI.
Modern History 5	History IV.
* Dressmaking 2½, 5	Household Science VIII.

JUNIOR YEAR.

FIRST TERM.

Literature 5	English VII.
Entomology 5, 7	Zoology II.
Floriculture 5	Floriculture II.
German 5, or,	German I.
Latin 5	Latin I.
Cookery 2½, 3	Household Science IX.

SECOND TERM.

Plant Physiology 5, 7	Botany III.
Literature 5	English VIII.
Floriculture 5	Floriculture III.
German 5, or,	German II.
Latin 5	Latin II.
Vertebrate Anatomy 5, 7	Zoology III.
Cookery 1½, 3	Household Science X.
Physical Culture 1½, 3	Physical Culture VI.

THIRD TERM.

Dairying 5, or,	Agriculture V.
American Literature 5	English IX.
German 5, or,	German III.
Latin 5	Latin III.
Physiology 5, 7	Zoology IV.
Civics 5	Political Science II.
Cookery 3	Household Science XI

Students desiring to elect thesis work in the department of chemistry must take Course V in chemistry in the Junior year.

SENIOR YEAR.

FIRST TERM.

Economics 5	Political Science I.
Aesthetics 5	Household Science XII.
German 5, or,	German IV.
Latin 5	Latin IV.

†*Electives.*

Literature 5	English X.
Botany 5, 7	Botany IV.
Zoology 5, 7	Zoology V.
Bacteriology 5, 7	Bacteriology I.
Elocution 1, 2	Elocution IV.
Drawing 2½, 5	Drawing IV.
Chemistry of Foods 5, 7	Chemistry XII.
Geology 5	Geology I.

SECOND TERM.

Psychology 5	Mental Science I.
German 5, or,	German V.
Latin 5	Latin V.
Aesthetics 5	Household Science XIII.

†*Electives.*

Physics 5, 7	Physics I.
Chemistry of Foods 5, 7	Chemistry XIII.
Zoology 5, 7	Zoology VI.
Botany 5, 7	Botany V.
Elocution 1, 2	Elocution V.
Drawing 2½ 5	Drawing V.
Bacteriology 5, 7	Bacteriology II.
Literature 5	English XI.

THIRD TERM.

Domestic Lectures 5	Household Science XIV.
German 5, or,	German VI.
Latin 5	Latin VI.

† *Electives.*

Literature 5.....	English XII.
Physics 5, 7.....	Physics II.
Chemistry of Foods 5, 7.....	Chemistry XIV.
Zoology 5, 7.....	Zoology VII.
Botany 5, 7.....	Botany VI.
Elocution 1, 2.....	Elocution VI.
Drawing 2½, 5.....	Drawing VI.
Astronomy 5.....	Mathematics XI.
Bacteriology 5, 7.....	Bacteriology III.
Landscape Gardening 5.....	Horticulture III.

* Latin or German may be elected instead, but no credit will be given towards graduation for less than the full course of six terms.

† In addition to the regular studies seniors must select from the electives enough hours to form a full course of 22 hours.

A student may upon obtaining written consent of the heads of departments interested, substitute higher mathematics for any other branch of study.

COURSE IN MECHANICAL ENGINEERING

FRESHMAN YEAR.

FIRST TERM.

Algebra 5	Mathematics I.
English Composition 5	English I.
General History 5	History I.
* { Freehand Drawing 1½, 3	Drawing I.
{ Elocution 1, 2	Elocution I.
Woodwork 2½, 5	Shopwork I.
Military Drill 2, 4	Military I.

SECOND TERM.

Geometry 5	Mathematics IV.
English Composition 5	English II.
*General History 5	History II.
Elocution 1, 2	Elocution II.
Freehand Drawing 1½, 3	Drawing II.
Woodwork 2½, 5	Shopwork II.
Military Drill 1, 2	Military II.
Physical Culture 1, 2	Physical Culture I.

THIRD TERM.

Geometry 5	Mathematics V.
Composition and Rhetoric 5	English III.
Modern History 5	History IV.
*Freehand Drawing 2½, 5	Drawing III.
Woodwork 2½, 5	Shopwork III.
Military Drill 2½, 5	Military III.

SOPHOMORE YEAR.

FIRST TERM.

Trigonometry 5	Mathematics VI.
Rhetoric 5	English IV.
Mechanical Drawing 5, 10	Mechanical Engineering I.
*Blacksmithing $2\frac{1}{2}$, 5	Shopwork IV.
Military Drill 2, 4	Military IV.

SECOND TERM.

Algebra 5	Mathematics II.
Physics 5, 7	Physics I.
Rhetoric 4	English V.
*Mechanical Drawing $2\frac{1}{2}$, 5	Mechanical Engineering II.
Blacksmithing $2\frac{1}{2}$, 5	Shopwork V.
Military Drill $1\frac{1}{2}$, 3	Military V.
Physical Culture 1, 2	Physical Culture II.

THIRD TERM.

Algebra 5	Mathematics III.
Physics 5, 7	Physics II.
English Literature 5	English VI.
Mechanical Drawing $1\frac{1}{2}$, 3	Mechanical Engineering III.
Blacksmithing $2\frac{1}{2}$, 5	Shopwork VI.
*Military Drill $2\frac{1}{2}$, 5	Military VI.

½ JUNIOR YEAR—MECHANICAL.

FIRST TERM.

Chemistry 5, 7.....	Chemistry I.
*Literature 5.....	English VII.
Analytical Geometry 5.....	Mathematics VII.
Descriptive Geometry 5.....	Mechanical Engineering V.
Machine Shop 2½, 5.....	Shopwork VII.
Military Drill 1½, 3.....	Military VII.
Military Science 1.....	Military VIII.

SECOND TERM.

Chemistry 5, 7.....	Chemistry II.
Physiology 5.....	Zoology V.
*Descriptive Geometry 3.....	Mechanical Engineering VI.
Calculus 5.....	Mathematics VIII.
Machine Shop 2½, 5.....	Shopwork VIII.
Military Drill 1, 2.....	Military IX.
Military Science 2.....	Military X.

THIRD TERM.

Mechanism 5.....	Mechanical Engineering IV.
Calculus 5.....	Mathematics IX.
Steam Engines and Boilers 4,	Mechanical Engineering VII.
Civics 5.....	Political Science II.
*Machine Shop 2, 4.....	Shopwork IX.
Military Drill 2½, 5.....	Military XI.

½ Students wishing to specialize in electrical engineering may elect to do so at the beginning of the junior year.

*Latin or German may be elected instead, but no credit will be given towards graduation for less than the full course of six terms.

SENIOR YEAR—MECHANICAL.

FIRST TERM.

Economics 5	Political Science I.
Mechanics of Engineering 5,	Mechanical Engineering VIII.
Thermodynamics 3	Mechanical Engineering IX.
Physics 5, 7	Physics III.
Military Drill 1½, 3	Military XII.
Military Science 1	Military XIII.

†*Electives.*

Literature 5	English X.
German 5, or,	German IV.
Latin 5	Latin IV.
Woodwork 2½, 5	Shopwork X.
Ironwork 2½, 5	Shopwork XI.
Mechanical Drawing 2½, 5	Mechanical Engineering X.
Mineralogy 3, 6	Mineralogy I.

SECOND TERM.

Structure of Woods and Metals 5, 7	Botany XI.
Psychology 5	Mental Science I.
Machine Design 5, 7	Mechanical Engineering XI.
Mechanics of Engineering 5,	Mechanical Engineering XII.
Military Drill 1, 2	Military XIV.
Military Science 2	Military XV.

†*Electives.*

Literature 5	English XI.
German 5, or,	German V.
Latin 5	Latin V.
Woodwork 2½, 5	Shopwork XII.
Ironwork 2½, 5	Shopwork XIII.
Mechanical Drawing 2½, 5	Mechanical Engineering XIII.
Assaying 3, 6	Chemistry IX.
Elocution 1, 2	Elocution V.

THIRD TERM.

Mechanics of Engineering 5.. Mechanical Engineering XIV.
 Machine Design 5, 7..... Mechanical Engineering XV.

†*Electives.*

German 5, or, German VI.
 Latin 5..... Latin VI.
 Astronomy 5..... Mathematics XI.
 American Literature 5..... English IX.
 Surveying 5, 7..... Mathematics X.
 Woodwork $2\frac{1}{2}$, 5..... Shopwork XIV.
 Ironwork $2\frac{1}{2}$, 5..... Shopwork XV.
 Mechanical Drawing $2\frac{1}{2}$, 5... Mechanical Engineering XVI.
 Assaying 3, 6..... Chemistry X.
 *Military Drill $2\frac{1}{2}$, 5..... Military XVI.

† In addition to the regular studies seniors must select from the electives enough hours to form a full course of 22 hours.

*Seniors who accept commissions as cadet officers are required to drill during the third term.

A student may upon obtaining written consent of the heads of departments interested, substitute higher mathematics for any other branch of study.

JUNIOR YEAR—ELECTRICAL.

FIRST TERM.

Electricity and Magnetism 6, 9	Electrical Engineering I.
Descriptive Geometry 5	Mechanical Engineering V.
Analytical Geometry 5	Mathematics VII.
*Literature 5	English VII.
Machine Shop 2½, 5	Shopwork VII.
Military Drill 1, 2	Military VII.
Military Science 1	Military VIII.

SECOND TERM.

Electricity and Magnetism 5, 7	Electrical Engineering II.
*Literature 5	English VIII.
Descriptive Geometry 3	Mechanical Engineering VI.
Calculus 5	Mathematics VIII.
Machine Shop 2½, 5	Shopwork VIII.
Military Drill 1, 2	Military IX.
Military Science 2	Military X.

THIRD TERM.

Calculus 5	Mathematics IX.
Electricity and Magnetism 3	Electrical Engineering III.
Steam Engines and Boilers 4	Mechanical Engineering VII.
*Civics 5	Political Science II.
Mechanism 5	Mechanical Engineering IV.
Machine Shop 2, 4	Shopwork IX.
Military Drill 2½, 5	Military XI.

SENIOR YEAR—ELECTRICAL.

FIRST TERM.

Economics 5	Political Science I.
Mechanics of Engineering 5	Mechanical Engineering VIII.
Alternating Currents and Dynamo Design 5, 7	{ Electrical Engineering IV.
Physics 3½, 7	
Military Drill 1, 2	Military XII.
Military Science 1	Military XIII.

† *Electives.*

Literature 5	English X.
German 5, or,	German IV.
Latin 5	Latin X.
Woodwork 2½, 5	Shopwork X.
Ironwork 2½, 5	Shopwork XI.
Mechanical Drawing 2½, 5	Mechanical Engineering X.
Mineralogy 3, 6	Mineralogy I.

SECOND TERM.

Psychology 5	Mental Science I.
Machine Design 5, 7	Mechanical Engineering XI.
Mechanics of Engineering 5	Mechanical Engineering XII.
Alternating Currents and Dynamo Design 5, 7	{ Electrical Engineering V.
Military Drill 1, 2	
Military Science 2	Military XIV.
	Military XV.

† *Electives.*

German 5, or,	German XI.
Latin 5	Latin XI.
Woodwork 2½, 5	Shopwork XII.
Ironwork 2½, 5	Shopwork XIII.
Mechanical Drawing 2½, 5	Mechanical Engineering XIII.

† Assaying 3, 6	Chemistry IX.
Elocution 1, 2	Elocution V.
Literature 5	English XI.

THIRD TERM.

Mechanics of Engineering 5	Mechanical Engineering XIV.
Machine Design 5	Mechanical Engineering XV.
Alternating Currents and Dynamo Design 5, 7	} Electrical Engineering VI.

† *Electives.*

German 5, or,	German XII.
Latin 5	Latin XII.
Astronomy 5	Mathematics XI.
American Literature, 5	English IX.
Surveying 5, 7	Mathematics X.
Woodwork 2½, 5	Shopwork XIV.
Ironwork 2½, 5	Shopwork XV.
Mechanical Drawing 2½, 5	Mechanical Engineering XIV.
Assaying 3, 6	Chemistry X.
† Military Drill 2½, 5	Military XVI.

* Latin or German may be elected instead, but no credit will be given towards graduation for less than the full course of six terms.

† Students electing Assaying must have previously taken Mineralogy I.

‡ Seniors who accept commissions as cadet officers are required to drill during the third term.

In addition to the regular studies seniors must select from the electives enough hours to form a full course of 22 hours.

A student may upon obtaining written consent of the heads of departments interested, substitute higher mathematics for any other branch of study.

COURSE IN PHARMACY.

FRESHMAN YEAR.

FIRST TERM.

Algebra 5.....	Mathematics I.
English Composition 5.....	English I.
General History 5.....	History I.
Latin 5.....	Latin I.
Freehand Drawing 1½, 3	Drawing I.
Elocution 1, 2.....	Elocution I.
† Military Drill 2, 4	Military I.

SECOND TERM.

Geometry 5	Mathematics IV.
English Composition 5	English II.
Latin 5	Latin II.
General History 5.....	History II.
Freehand Drawing 1½, 3	Drawing II.
Elocution 1, 2.....	Elocution II.
Military Drill 1, 2.....	Military II.
Physical Culture 1, 2.....	Physical Culture I.

THIRD TERM.

Geometry 5	Mathematics V.
Composition and Rhetoric 5.....	English III.
Latin 5.....	Latin III.
Plant Morphology 5, 7.....	Botany I.
Military Drill 2½, 5.....	Military III.

† Throughout the course young ladies take Physical Culture instead.

SOPHOMORE YEAR.

FIRST TERM.

Chemistry 5, 7	Chemistry I.
Rhetoric 5	English IV.
German 5	German I.
Plant Histology 5, 7	Botany II.
Military Drill 2, 4	Military IV.

SECOND TERM.

Physics 5, 7	Physics I.
Rhetoric 4	English V.
German 5	German II.
Chemistry 5, 7	Chemistry II.
Military Drill 1, 2	Military V.
Physical Culture 1, 2	Physical Culture I.

THIRD TERM.

German 5	German III.
Zoology 5, 7	Zoology I.
Chemistry 5, 10	Chemistry XV.
Modern History 5	History IV.
Military Drill 2½, 5	Military VI.
Physics 5, 7	Physics II.

JUNIOR YEAR.

FIRST TERM.

Literature 5	English VII.
Medical Chemistry 5	Chemistry XVI.
Therapeutics and Doses 2.....	Pharmacy V.
Pharmacy 2	Pharmacy II.
Military Drill 1, 2	Military VII.
Military Science 1.....	Military VIII.
Nomenclature 1	Pharmacy VI.
German 5.....	German IV.

SECOND TERM.

Medical Chemistry 5	Chemistry XVII.
Pharmacognosy 2	Pharmacy III.
Vertebrate Anatomy 5, 7.....	Zoology III.
Pharmacy 3, 5	Pharmacy IV.
Literature 5	English VIII.
Military Drill 1, 2	Military IX.
Military Science 2	Military X.
German 5	German V.

THIRD TERM.

Quantitative Chemistry 5, 7.....	Chemistry V.
Physiology 5, 7.....	Zoology IV.
Plant Classification 5, 7.....	Botany VII.
Civics 5.....	Political Science II.
Military Drill 2½ 5.....	Military XI.
Pharmacognosy 2.....	Pharmacy I.
Pharmacy 3, 5	Pharmacy VII.
German 5	German VI.

SENIOR YEAR.

FIRST TERM.

Materia Medica and Therapeutics 3	Pharmacy VIII.
Operative Pharmacy 4, 6	Pharmacy IX.
Pharmaceutical Analysis 5, 10	Chemistry XVIII.
Military Drill 1, 2	Military XII.
Military Science 2	Military XIII.
Bacteriology 5, 7	Bacteriology I.

SECOND TERM.

Materia Medica and Therapeutics 3	Pharmacy XIV.
Prescription Practice 4½, 7	Pharmacy X.
Pharmaceutical Analysis 5, 10	Chemistry XIX.
Military Drill 1, 2	Military XIV.
Military Science 2	Military XV.
Bacteriology 5, 7	Bacteriology II.

THIRD TERM.

Pharmacognosy and Synonyms 3	Pharmacy XI.
Prescription Practice 5½, 8	Pharmacy XV.
Toxicology 1	Pharmacy XIII.
Pharmaceutical Analysis 5, 10	Chemistry XX.
Military Drill 2½, 5	Military XVI.
Bacteriology 5, 7	Bacteriology III.

A student may upon obtaining written consent of the heads of departments interested, substitute higher mathematics for any other branch of study.

* COURSE IN MINING.

FRESHMAN YEAR.

FIRST TERM.

†Algebra 5.....	Mathematics I.
†English Composition 5.....	English I.
†General History 5.....	History I.
Freehand Drawing 1½, 3.....	Drawing I.
Elocution 1, 2.....	Elocution I.
†Woodwork 2½, 5.....	Shopwork I.
†Military Drill 2, 4.....	Military I.

SECOND TERM

Geometry 5.....	Mathematics IV.
†English Composition 5.....	English II.
†General History 5.....	History II.
Freehand Drawing 1½, 3.....	Drawing II.
Elocution 1, 2.....	Elocution II.
†Woodwork 2½, 5.....	Shopwork II.
†Military Drill 1, 2.....	Military II.
†Physical Culture 1, 2.....	Physical Culture I.

THIRD TERM.

Geometry 5.....	Mathematics V.
†Composition and Rhetoric 5.....	English III.
Modern History 5.....	History III.
Freehand Drawing 2½, 5.....	Drawing III.
†Physical Geography 5.....	Physical Geography I.
†Military Drill 2½, 5.....	Military III.

* Students desiring to take a short course in mining will be given a certificate in mining after completing the studies marked [†].

SOPHOMORE YEAR.

FIRST TERM.

Economics 5	Political Science I.
Trigonometry 5	Mathematics VI.
† Rhetoric 5	English IV.
† Mechanical Drawing 5, 10	Mechanical Engineering I.
† Blacksmithing $2\frac{1}{2}$, 5	Shopwork IV.
† Military Drill 2, 4	Military IV.

SECOND TERM.

Physics 5, 7	Physics I.
Algebra 5	Mathematics II.
† Rhetoric 4	English V.
† Mechanical Drawing $2\frac{1}{2}$, 5	Mechanical Engineering II.
† Blacksmithing $2\frac{1}{2}$, 5	Shopwork V.
† Military Drill 1, 2	Military V.
Physical Culture 1, 2	Physical Culture II.

THIRD TERM.

Physics 5, 7	Physics II.
Algebra 5	Mathematics III.
Surveying 5, 7	Mathematics X.
† Mechanical Drawing $1\frac{1}{2}$, 3	Mechanical Engineering III.
† Tool Dressing $2\frac{1}{2}$, 5	Shopwork VI.
† Military Drill $2\frac{1}{2}$, 5	Military VI.

JUNIOR YEAR.

FIRST TERM.

†Chemistry 5, 7	Chemistry I.
Mine Surveying 3	Mathematics XIII.
Analytical Geometry 5	Mathematics VII.
Descriptive Geometry 5	Mechanical Engineering V.
†Machine Shop 1½, 2½	Shopwork VII.
Military Drill 1, 2	Military VII.
Military Science 1	Military VIII.
†Geology 5	Geology I.

SECOND TERM.

Tunneling, leveling, etc., 5	Mathematics XIV.
†Chemistry 5, 7	Chemistry II.
Descriptive Geometry 3	Mechanical Engineering XI.
Calculus 5	Mathematics VIII.
†Machine Shop 2½, 5	Shopwork VIII.
Military Drill 1, 2	Military IX.
Military Science 2	Military X.

THIRD TERM.

Calculus 5	Mathematics IX.
Steam Engines and Boilers 4	Mech. Engineering VII.
Civics 5	Political Science II.
Military Drill 2½, 5	Military XI.
†Mechanism 5	Mechanical Engineering IX.
†Qualitative Analysis 5, 10	Chemistry XV.

SENIOR YEAR.

FIRST TERM.

†Mineralogy 3, 6	Mineralogy I.
Mechanics of Engineering 5	Mechanical Engineering VIII.
Thermodynamics 3.	Mechanical Engineering IX.
†Physics 5, 7.	Physics III.
Military Drill 1, 2	Military XII.
Military Science 1.	Military XIII.

SECOND TERM.

†Metallurgy 5, 7.	Mineralogy II.
†Assaying 3, 6.	Chemistry IX.
Psychology 5	Mental Science I.
Mechanics of Engineering 5	Mechanical Engineering XII.
Military Drill 1, 2.	Military XIV.
Military Science 2.	Military XV.

THIRD TERM.

Mining Engineering 5.	Mathematics XV.
Mining Hydraulics }	Mechanical Engineering XVII.
and Ventilation 5 }	
†Assaying 3, 6.	Chemistry X.
Mechanics of Engineering 5.	Mechanical Engineering XIV.
†Machine Design 5.	Mechanical Engineering XV.
Military Drill 2½, 5.	Military XVI.

†Students cannot take machine design in third term without having same in second term.

A student may upon obtaining written consent of the heads of departments interested, substitute higher mathematics for any other branch of study.

LITERARY COMMERCE COURSE.

FRESHMAN YEAR.

FIRST TERM.

Bookkeeping 3.....	Bookkeeping I.
English Composition 5.....	English I.
Commercial Arithmetic 5.....	Arithmetic I.
Algebra 5.....	Mathematics I.
Penmanship 2.....	Penmanship I.
Military Drill 2, 4, or.....	Military I.
Physical Culture 1½, 3.....	Physical Culture I.

SECOND TERM.

Bookkeeping 7, 3.....	Bookkeeping II.
English Composition 5.....	English II.
Commercial Arithmetic 5.....	Arithmetic II.
Geometry 5.....	Mathematics IV.
Penmanship 2.....	Penmanship II.
Military Drill 1, 2, or.....	Military II.
Physical Culture 1½, 3.....	Physical Culture II.

THIRD TERM.

Bookkeeping 3.....	Bookkeeping III.
Composition and Rhetoric 5.....	English III.
Commercial Arithmetic 5.....	Arithmetic III.
Geometry 5.....	Mathematics V.
Penmanship 2.....	Penmanship III.
Military Drill 2½, 5, or.....	Military III.
Physical Culture 1½, 3.....	Physical Culture III.

SOPHOMORE YEAR.

FIRST TERM.

Bookkeeping 3	Bookkeeping IV.
Stenography 4, 5	Stenography I.
Typewriting 4, 5	Typewriting I.
Rhetoric 5	English IV.
Floriculture 2, 3	Floriculture I.
Military Drill 2, 4, or	Military IV.
Physical Culture 1½, 3	Physical Culture IV.

SECOND TERM.

Bookkeeping 3	Bookkeeping V.
Rhetoric 4	English V.
Stenography 5	Stenography II.
Typewriting 5	Typewriting II.
Algebra 5	Mathematics II.
Military Drill 1, 2, or	Military V.
Physical Culture 1, 2	Physical Culture V.

THIRD TERM.

Bookkeeping 3	Bookkeeping VI.
Stenography 5	Stenography III.
Typewriting 5	Typewriting III.
Algebra 5	Mathematics III.
Zoology 5, 7	Zoology I.
Military Drill 2½, 5, or	Military VI.
Physical Culture 1½, 3	Physical Culture VI.

JUNIOR YEAR.

FIRST TERM.

Commercial Law 3.....	Commercial Law I.
Latin 5, or,	Latin I.
German 5.....	German I.
English 5.....	English VII.
Entomology 5, 7.....	Zoology II.
General History 5.....	History I.
Military Drill 1, 2	Military VII.
Military Science 1.....	Military VIII.
Physical Culture $\frac{3}{4}$, $1\frac{1}{2}$	Physical Culture VII.

SECOND TERM.

Commercial Law 3.....	Commercial Law II.
Latin 5, or,	Latin II.
German 5.....	German II.
English 5.....	English VIII.
General History 5.....	History II.
Vertebrate Anatomy 5, 7.....	Zoology III.
Military Drill 1, 2.....	Military IX.
Military Science 2.....	Military X.
Physical Culture $\frac{3}{4}$, $1\frac{1}{2}$	Physical Culture VIII.

THIRD TERM.

Civics 5.	Civics I.
Latin 5, or,.....	Latin III.
German 5.....	German III.
English 5.....	English IX.
Modern History 5	History IV.
Military Drill $2\frac{1}{2}$, 5	Military XI.
Physical Culture $2\frac{1}{2}$, 5.....	Physical Culture IX.

SENIOR YEAR.

FIRST TERM.

Economics 5	Political Science I.
Latin 5, or,	Latin IV.
German 5	German IV.
English 5	English X.
Aesthetics 5	Household Science XII.
Military Drill 1, 2	Military XII.
Military Science 1	Military XIII.
Physical Culture $\frac{3}{4}$, $1\frac{1}{2}$	Physical Culture X.

SECOND TERM.

Latin 5, or,	Latin V.
German 5	German V.
English 5	English XI.
Aesthetics 5	Household Science XIII.
Psychology 5	Mental Science I.
Military Drill 1, 2	Military XIV.
Military Science 2	Military XVI.
Physical Culture $\frac{3}{4}$, $1\frac{1}{2}$	Physical Culture XI.

THIRD TERM.

Latin 5, or,	Latin VI.
German 5	German VI.
Astronomy 5	Mathematics XI.
Geology 5	Geology I.
Military Drill $2\frac{1}{2}$, 5	Military XV.
Physical Culture $2\frac{1}{2}$, 5	Physical Culture XII.

A student may upon obtaining written consent of the heads of departments interested, substitute higher mathematics for any other branch of study.

DEPARTMENT OF MUSIC.

MARY SMITH PHILBRICK, Director.

Pianoforte—Based on two lessons a week.

Grade I—Kohler, Bk. I. Easy pieces. One term. Course I.

Grade II—Czerny, arr. by Germer, Bk. I. Sonatinas by Clementi. Pieces. Two terms. Courses II, III.

Grade III—Czerny, arr. by Germer, Bk. II. Czerny Octave Studies. Sonatas by Haydn, Mozart, and Kuhlau. Raff 30 Etudes. Major and Minor Scales. Krause Trill Studies, Bk. I. Phrasing Studies by Heller and Bertini. Three terms. Courses IV, V, VI.

Grade IV—Czerny, arr. by Germer, op. 447. Twenty-five Studies by Cramer. Bach, Inventions and Preludes. Sonatas by Mozart and Beethoven. Pieces. Three terms. Courses VII, VIII, IX.

Grade V—Gradus Tausig. Bach two and three part inventions. Cramer Studies concluded. Concertos and difficult piano pieces for concert work. Three terms. Courses X, XI, XII.

Voice Culture—Based on two lessons a week.

Grade I—Vocal exercises for placing the voice. Vaccai Italian Studies. Bonaldi, Bk. I in part. One term. Course I.

Grade II—Bonaldi completed. Conconi 50 Studies. Lutgen Trill Studies, Bk. I. Sieber Elementary Exercises. Two terms. Courses II, III.

Grade III—Lutgen, Bk. II—Studies in phrasing by all composers. Bk. I, Scales and Exercises. Nava Studies,

Bk. I, op. 36 and op. 22. Three terms. Courses IV, V, VI.

Grade IV—Bordogni, Bk. I. Exercises in Bravura work and rapid scales by Lamperti. Oratorio and opera selections. Six terms. Courses VII, VIII, IX, X, XI, XII.

Pieces suited to the pupil with all studies.

Drill in part singing through 3d and 4th grades.

Three grades of the Pianoforte course are required for graduation.

Recitals, both public and private, will aid the students in obtaining mastery of themselves before an audience.

Harmony.

First Year—Simple Chords. Inversions. Modulation. Analysis.

Text-book: Goetschius' Tone Relations.

Second Year—Polyphonic forms. Composition work.

Theory and History.

First Year—Elson's canons of String. The laws of Sound. The history of Orchestral Instruments. The history of Forms. Musical terms and Expressions.

Second Year—General History of the Scale. Jewish Music. The Grecian Tetrachord. The Gregorian Chant. The Folk Songs of Germany—of France. The rise of Opera 1600 A. D. The Period of Bach and Handel. The Modern Orchestra. The rise and development of pianoforte playing through the Golden and the Classic Age to the present day. America's history in early Boston and elsewhere.

Harmony, Theory and History are required for graduation in Pianoforte and Voice Culture.

The Choral Classes—Based on three lessons a week.

First Year—History of music in relation to national history. Tone relations. The major and minor second 3d and

6th. Practical work in reading and writing intervals. Chorus from Oratorio. Glee and simple chorus work. The Chant. Courses I, II, III.

Second Year—The history of the scale. The pitch of the orchestra. Perfect 4ths and 5ths. Practice in writing intervals. Keys. Chorus and quartet work. "Joan of Arc." The "St. Paul" Oratorio complete. Courses IV, V, VI.

Third Year—Musical terms and forms. The history of the German Folk Song, the English Ballad and the American Song. Lectures on Schubert, Wagner, Mozart, Beethoven. Practice with the 7th, all diminished, minor and augmented intervals. Brahms's "Vineyard." Chorus from Messiah, Elijah, The Holy City. Selections from the Operas. Courses VII, VIII, IX.

This course is designed to give those of limited time and means an intelligent understanding of the origin and development of song and instrumental music, as well as the ability to read at sight.

Graduation.—Upon completion of any course in music, the student will receive a certificate of graduation. While none of the regular college studies are required in the department of music, a broad, general education is earnestly recommended as necessary to success in the musical profession.

Terms.—Tuition in this department is payable to the College Clerk strictly in advance. Pianoforte or voice culture—private lessons of one-half hour, 50 cents each.

Choral Work.—Three dollars per year or \$1.50 per term.

Students registering in music are expected to pursue the study throughout the term.

Piano rent, one hour per day, \$1 per month. Books and music, \$3 to \$5 per term.

DEPARTMENTS OF INSTRUCTION.

MENTAL AND POLITICAL SCIENCE.

AGRICULTURE.

HISTORY AND LATIN.

HOUSEHOLD SCIENCE.

MODERN LANGUAGES.

MECHANICAL AND ELECTRICAL ENGINEERING

CHEMISTRY AND PHARMACY.

ENGLISH LANGUAGE AND LITERATURE.

MATHEMATICS AND ENGINEERING.

ZOOLOGY.

BOTANY AND HORTICULTURE.

ELOCUTION.

FLORICULTURE AND GARDENING.

BACTERIOLOGY.

DRAWING.

MILITARY.

PHYSICAL CULTURE.

MINING.

LITERARY COMMERCE.

MUSIC.

MENTAL AND POLITICAL SCIENCE.

THOMAS M. GATCH, A. M., PH. D.

Course I.—*Economics*.—Senior year; first term. During the first part of the term our aim is to familiarize the student with the principles of the science. The last part of the term is devoted principally to debates, informal discussions and theme work. Our library is well supplied with reference books in this department. Students are encouraged in original investigation. The labor question, socialism, taxation, money and tariff receive attention. Five hours a week. Ely's Introduction, with Lectures.

Course II.—*Civics*.—Junior year; third term. Practical information is presented as to the rights and duties which attach to American citizenship. Constant care is taken to give reasons as well as justification for each power exercised by our government, and to inculcate in every way the moral obligations of good citizenship. Five hours a week. Willoughby, "Rights and Duties of American Citizenship," with Lectures.

Course III.—*Psychology*.—Senior year; second term. This study presupposes a considerable acquaintance with the structure and functions of the brain and nervous system. Students acquire this knowledge in the laboratory under the direction of the professor of zoology. The intellectual faculties, the sensibilities and the will are carefully studied; the various schools of philosophy are criticised and compared and themes are often required from members of the class. Five hours a week. Halleck, with Lectures.

AGRICULTURE.

JAMES WITHYCOMBE, M. Agr., Professor of Agriculture.
F. L. KENT, B. Agr., Assistant Professor of Agriculture.
W. J. KENT, Foreman.

The object sought throughout the entire agricultural course is to familiarize the student with the art and science of agriculture. This embraces the study of zoology, botany, chemistry and bacteriology, the sciences related to agriculture; and the supplementary studies of mathematics, economics, physics, history, language and other cultural branches, all of which broaden the course of study and tend to elevate the educated farmer to the intellectual level of other professions.

The college laboratories are strictly modern in their appointments and are supplied with up-to-date equipments, which afford the student unusual opportunities for making a thorough study of all the sciences related to agriculture.

While the theory of agriculture, as based upon the sciences, is being taught, the industrial side is not overlooked. Instruction is given in wood and iron working in the carpenter and blacksmith shops under competent supervision. The student is also taught how to handle and care for steam machinery, and is made thoroughly familiar with the mechanism of the farm traction engine.

The instruction given in the class-room is directly supplemented by actual demonstrations of the best agricultural practice on the college farm, thus giving to the student an

opportunity to observe the methods employed, and enabling him to note from time to time the results of the practical applications of science to agricultural methods.

The college and station farm consists of 199 acres, 140 of which are devoted to farm crops, pasture, and experimental purposes. The farm is equipped with dairy building, horse-barn, cattle-barn, silos, piggery, tool-house, engine-house, etc., and with typical specimens of several breeds of stock.

Students laboring on the farm and in gardens, receive pay at the rate of 10 cents per hour. Only comparatively few persons can be so employed, as the amount of work to be done is limited. Those only who by their work prove to be valuable laborers will be employed.

DAIRYING.

One of the purposes of the Oregon Agricultural College is to advance the business industries of the state. It is believed that dairying is one of the most important lines of work that can now be undertaken in Oregon. There is a large body of land in the state which is especially adapted to this industry. For this reason dairying has been introduced as a branch of study in the agricultural course. A separate building has been provided for such instruction and it is fitted up with all the necessary machinery for carrying on the work in the most approved way. An expert dairyman is in charge of this work.

All students in the agricultural department will be required to study dairying not only as a science but as an art. Those taking the household science course will have the same opportunities as the agricultural students.

This is a line of practical work which, it is believed, will prove of great advantage both to the student and to the

state. The practical instruction includes both butter and cheese making.

A short course has been provided, as described elsewhere in the catalogue, whereby practical instruction in dairying may be obtained by those who can not avail themselves of a college course.

The instruction in applied agriculture extends through the freshman, sophomore, junior and senior years, as shown in the following synopsis of courses :

Course I.—*Breeds of Stock*.—Freshman year; third term. The study of the history of the different classes of farm stock, their origin and characteristics. By means of charts, in the class-room the student is made familiar with the different points of animal form preparatory to the use of the score-card system for judging farm animals. This is followed by a practical application of this system in judging dairy cows, beef cattle, mutton sheep and swine. In this manner the student obtains useful information relative to animal form and function, and thus becomes acquainted with the points of excellence in the typical pure bred, as well as the points of merit in the animal designed for the butcher's block. Five hours a week.

Course II — *Theoretical Dairying*.—Sophomore year; second term. The principles of modern dairy practice will be taught in the classroom. Instruction will be given by textbook and lectures. Five hours a week for one half term.

Course III.—*Irrigation and Drainage*. —Sophomore year; third term. In the discussion of this subject it will be the aim to deal with those relations of water to soils and to plants which must be grasped in order to permit of a rational practice of applying, removing or conserving soil moisture in crop production. The subject will be considered

from the standpoints of the farmer, the fruit grower and the gardener rather than from that of the engineer. The various methods of applying water; the laying out and construction of farm drains; and the effect of irrigation and drainage on the chemical and physical conditions of the soil will be considered. Five hours a week.

Course IV.—*Soils and Manures*.—Sophomore year; second term. The origin and formation of soils; soil tillage; management and application of manures; green manuring; organic and mineral manures; soil exhaustion; rotation of crops, and methods of improving worn-out soils. Five hours a week for one half term.

Course V.—*Dairying*.—Junior year; first term. (a) Practical work in the dairy for agricultural students. The principles taught in the sophomore year will be put into practice in the actual work of the manufacture of butter and cheese. The Babcock test, rennet tests, and curd tests, as well as the subjects of creamery accounting will receive due attention. Five hours a week.

(b) Practical work in the dairy for household science students. This work is practically the same as above. Wing's "Milk and its Products" will also be used as a text during a portion of the term. Five hours a week throughout the third term.

Course VI.—*Stock Feeding and Breeding*.—Senior year; third term. Stock feeding covers the subject of rations for milk and meat production; how best balanced for economical feeding. Stock breeding covers the subjects of atavism, heredity, in-and-in-breeding, variation, pre-potency and care of breeding animals. Opportunity is given for judging and scoring live stock, and for studying the essential points of breeds adapted to different purposes. Four hours a week.

Course VII.—*Soil Physics*.—Senior year; first term. The work will include a study of various types of soils as to their mechanical structure and analysis; of conditions influencing temperature, capillary action and water-holding capacity of soil; effects of drainage and cultivation upon the conservation of moisture in soils; the texture of soils; the use of fertilizers and amendments and their effects on soils. Class room and laboratory work, two and one half hours a week.

Course VIII.—*Soil Physics*.—Senior year; second term. This is a continuation of Course VII, Agriculture. Two and one half hours a week.

Course IX.—*Veterinary Science*.—Senior year; third term. This subject will be taught by lectures covering the anatomy of the horse, and taking up the diseases most common to domestic animals, giving causes, symptoms, and treatment for the same. Special stress is placed upon proper treatment to prevent disease in domestic animals. Five lectures a week.

Instruction is given largely by lectures, suitable books being selected for reference. Miles' book on drainage. Curtis' "Horses, Cattle, Sheep, and Swine." Warfield's "Cattle Breeding," Stewart's "Stock Feeding." Armsby's Manual of Cattle Feeding. Wing's "Milk and its Products." Shaw's "Study of Breeds." "Soil" by King. "Fertility of Soil" by I. P. Roberts. "Irrigation and Drainage" by King. "Physics of Agriculture" by King. "Feeds and Feeding" by Henry.

HISTORY AND LATIN.

J. B. HORNER, A. M., LITT. D., Professor.

HISTORY.

Course I.—*Greek and Roman History*.—Freshman year; first term. Includes the study of general Hellenic development; the Athenian leadership; the Hellenistic or Alexandrian conquests and kingdoms. The political organizations of republican Rome in the prae- and post-Punic periods. Study on the pagan empire; Teutonic migrations. The Christian empire under Roman control. Five hours a week.

Course II.—*Medieval History*.—Freshman year; second term. A study of social and political institutions of the fifth to the fifteenth centuries. Five hours a week.

Course III.—*History of Eastern Peoples*.—Sophomore year; second term. A survey of the history of China, Japan and India. Religion, arts and general culture of Egypt, Chaldaea, Assyria, Babylonia, Persia. Five hours a week.

Course IV.—*Modern History*.—Sophomore year; third term. This is a study of the era of the reformation and renaissance. (1490-1648). A general study of the age of Louis XIV., Frederick the Great, Anne and the Georges, Maria Teresa, and Peter the Great. The great French revolution and the wars of Napoleon. The states-general of 1789 to the congress of Vienna, 1815. German and Italian freedom and unity. Discussions touching the material progress of the age; famous works of art; foundations, inventions, discoveries, enterprises, improvements and investigations. Five hours a week.

The college is supplied with maps, charts, and a good working library of historical reference books.

In addition to the individual work of the student, as outlined above, lectures are given on the more important periods, such as the great reformation, thirty years' war, the English reformation, and the French revolution. 'Textbook, Myers' General History.

LATIN.

As may be seen in the outline of the courses of study, Latin is offered as an elective to students in agriculture, household science, and mechanical and electrical engineering, but it is required of students in the pharmacy course.

Course I.—*Elementary Latin*.—Freshman year; first term. First three declensions and first and second conjugations. Numerous exercises in translating Latin into English as well as English into Latin. Latin reader: Collar's *Via Latina*.

Course II.—*Elementary Latin*.—Freshman year; second term. Declensions and regular conjugations finished. Review. Exercises in translating. *Via Latina*.

Course III.—*Elementary Latin*.—Freshman year; third term. Irregular verbs. Subjunctive mood. Ablative absolute. Sequence of tenses, etc. Exercises. *Via Latina*.

Courses IV to XII.—*Advanced Latin*.—Sophomore and succeeding years. The first year's instruction is largely grammatical, prominence being given to Latin writing as the best method of acquiring a mastery of the language, Latin composition is eminently helpful in scientific research, and it is suggestive to the student of English. This preliminary work done, the student is then trained to appreciate the literature. Attention is called, during the reading of various authors, to those numerous problems in the history, thought and institutions of the Romans which illustrate similar phenomena noticeable among ourselves. The contribution of the Romans to the language, literature, and institutions of our time is so great that a thorough acquaintance with their life is of the highest educational value.

HOUSEHOLD SCIENCE.

MARGARET C. SNELL, M. D., Professor.
MARY AVERY, Assistant in Sewing.

Self interest and public interest make it apparent to every intelligent person how greatly in need are subjects pertaining to the home of being "touched to fine issues;" hence their introduction as studies into college curricula.

We have been reviled as "the most common schooled, and least cultivated, among all civilized nations," and this largely through our deplorable indifference to, and ignorance of, the common facts and necessities of life.

The home as we find it to-day has scant warrant that anything born of its teaching is worth while to impart, yet the problem grows of how to get better results, how to lessen the labor of the farmer's wife, the washer-woman, the cook, the boarding-house keeper, the city missionary, the school teacher, the woman of fashion.

The solution requires something more than the knitting of the brow over theories; there must be actual testing of these theories by practice in the college laboratory, if they are to have value and permanence. The precious acquisition of the scholar who *knows*, must be further supplemented by that of the artist who *does*.

The various subjects pertaining to home life are taught under the following heads:

Course I.—*General Hygiene*.—Freshman year; first term. Good health is acknowledged as one of the prime factors of success in life; lectures and talks on this important subject are not neglected. The amenities of home, and readings on

kindred topics, give mental occupation to the sewing hour. One hour a week.

Courses II, IV, V.—*Sewing*.—Freshman year. During the first term there are sewing lectures and practice work, one hour a day, on sewing samples. Here are acquired and strengthened those invisible impulses: industry, dexterity, patience, exactness. Four hours a week.

Second term, sewing continued. Four hours a week.

During the third term sewing is combined with the making of simple garments. Readings, conversation. Five hours a week.

Courses VI, VII, VIII.—*Dressmaking*.—Sophomore year. Cleverness with scissors, tape line, and needle finds in dressmaking, millinery, home furnishing, a large field for the application of art principles to the living, moving canvas of actual life.

Instruction in dressmaking is an important branch of domestic science. Lectures will be given on the following subjects: The methods of manufacturing thread, cloths and other dressmaking material; hygienic principles of dressmaking; study and sketching of drapery; history of costume, etc.

During the first term the work includes draughting and making simple skirts, cutting, fitting and making lined waists from patterns; a study of the texture of goods. Five hours a week.

Throughout the second and third terms instruction is given in draughting and making lined waists, matching stripes and plaids, study of woolen textiles. Five hours a week.

Courses IX, X, XI.—*Cookery*.—Junior year. The first term's work includes instruction in canning of fruits, one-

half term; three lectures; one hour a day practice work in the kitchen laboratory; technological cookery; preparatory work in chemistry of foods.

The second and third terms' instruction includes practice work in cookery. Four hours a week throughout the year.

Course III.—*Etiquette*.—Freshman year; second term. Lectures and talks on social forms and usages; the art of entertaining; readings on the art of conversation. Mahaffy. One hour a week.

Course XII.—*Aesthetics*.—Senior year; first term. Lectures and recitations on the subject of aesthetics.

This term is given to the general subject of aesthetics in its relations to the subjective and objective world; the kinds and laws of beauty; class readings from various authors on aesthetics; the application of aesthetic principles to discourse as we find it illustrated in the great master pieces of literature. Five hours a week.

Course XIII.—*Aesthetics*.—Senior year; second term. Application of aesthetic principles to the fine arts, with a study of the best authors on these varied subjects. The two arts receiving especial attention during the coming year will be architecture and painting. Five hours a week.

Course XIV.—*Domestic Lectures*.—Senior year; third term. The term's work will include lectures on the following subjects: Special hygiene, including parentage, care of children, heredity, etc.; sanitation of the home; home furnishing; emergency lectures; fireside practice, etc. Five hours a week. Pomeroy's Ethics of Marriage.

MODERN LANGUAGES.

ELLEN J. CHAMBERLIN, A. M., Professor.

Opportunity to study German is offered throughout the different courses and is compulsory in the course in pharmacy during the sophomore and junior years. We teach in a large measure by the conversational method, and aim to bring the student so far that he can read with ease and facility, and understand so much of the language as will be most helpful to him in practical life. A knowledge of German is a business possession of undoubted value for any young man, or young woman.

Courses I to IV.—*Elementary German*.—Collar's Eysenbach—German grammar; First German Reader, Muller and Wenckbach's Gluck Auf. Hewett's German Reader. Constant practice in translating into German and in conversation.

Courses IV, V and VI.—*Advanced German*; Schiller's Wilhelm Tell; Jungfrau von Orleans; Marie Stuart. Lessing's Nathan der Weise; Seume's Mein Leben. Lectures on the life and works of Lessing, Goethe and Schiller and some of the minor writers of the eighteenth century. Grammar reviewed; Composition, Syntax.

MECHANICAL AND ELECTRICAL ENGINEERING.

GRANT A. COVELL, M. E., Professor.

E. C. HAYWARD, E. E., Assistant.

M. CLYDE PHILLIPS, B. M. E., Instructor in Ironwork and Drawing.

D. W. PRICHARD, Instructor in Woodwork.

Students in this department are allowed to choose either the course in mechanical engineering or the course in electrical engineering. Each course leads to the degree of Bachelor of Science, and the two courses are identical until the beginning of the junior year.

The course in mechanical engineering is intended especially for young men who expect to choose an industrial vocation and for those who are already, or expect to be, connected with some of the manufacturing establishments of the country.

The course in electrical engineering is designed to meet the needs of those who desire to turn their attention towards electrical science, the designing, the installation and the management of electric light and power plants, etc.

The shops are well equipped with tools and machinery from the best makers in the country; the idea being not only to have the shops well supplied with the necessary tools but also to make each shop a model as regards quality of equipment and systematic arrangement.

The uses of the various tools in the shop are taught by a series of exercise pieces which the student is required to make. After completing the exercises, the regular work consists in building and repairing machinery in the machine shop, mending farm implements, and making tools in the blacksmith shop, and other useful articles in the wood shop. So far as possible, all work in the shops is executed from drawings and blue prints, which must be followed accurately.

In the drafting room the student begins with linear drawing and follows a progressive course until he is able to make complete working drawings of whole machines, and finally he is encouraged to produce designs of his own and to make complete drawings and blue prints of them.

The scientific principles involved in machines and mechanical movements are taught in the class-room, as well as the application of mathematics to problems in mechanical engineering. The student is required to solve original problems and to depend upon his own judgment and ingenuity as far as possible.

EQUIPMENT.

The machine shop is equipped with one 24" x 24" iron planer, one universal milling machine, one universal tool grinder, one radial drill, one 20" drill press, one 20" engine lathe, one 16" engine lathe, three 14" engine lathes, one 15" shaper, one emery grinder, two 10" speed lathes, twelve bench vises, and numerous small tools, such as hammers, chisels, drills, reamers, taps and dies.

The blacksmith shop contains twenty stationary forges operated by an electric motor fan. Each forge is provided with anvil, hammers and tongs. The shop also contains two vises, a swedge block and a full set of swedges, fullers, and heading tools.

The woodshop contains one 4" four-sided moulder, one 24" surface planer, one iron saw table with rip and cut-off saws, one band saw, one jig saw, one 20" pattern-maker's lathe, one post boring machine, four 12" wood-turning lathes, and twenty hand benches, each equipped with a set of tools consisting of saws, planes, chisels and other small tools. Power is supplied by a 10 horse power electric motor.

The power house contains a 54 inch tubular boiler, pump, injector, feed water heater and a 40 horse power high speed automatic engine, belted direct to two 12½ kilowatt generators. These generators operate the motors in the machine shop, wood shop and blacksmith shop, and also furnish lights for the college buildings.

The steam, electrical and heating plants of the college furnish opportunity for much valuable experimental work in engineering, such as tests of boilers, engines, dynamos, motors, fans, pumps and injectors. The department is supplied with indicators, gauges, planimeters and other instruments to facilitate this work.

A Riehle testing machine of 50,000 pounds capacity, operated by an independent motor, affords means of testing the strength of metals, woods, stones or brick.

The following is an outline of the work done in the mechanical department:

SHOPWORK.

Courses I, II and III.—*Woodwork*.—Freshman year. A course in woodwork which includes carpentry, joinery and wood-turning, also the care and use of tools. Five hours a week throughout the year.

Courses IV, V and VI.—*Blacksmithing*.—Sophomore year. In this course the student is taught how to make and manage a forge fire; to shape iron by bending, drawing, upsetting and welding, and finally to make and temper cutting tools for the shops. Five hours a week.

Course VII.—*Machine Shop*.—Junior year; first term. This course is devoted principally to chipping, filing, polishing and hand work. Five hours a week.

Courses VIII and IX.—*Machine Shop*.—Junior year; second and third terms. These include a series of exercise

pieces in turning, shaping, milling and drilling which the student is required to make from drawings. Five and four hours a week respectively.

Courses X, XII and XIV.—*Woodwork*.—Senior year. These courses are elective and are intended for students who desire to specialize in this branch. Particular attention is given to the care and management of wood-working machines and to pattern-making. Five hours a week throughout the year.

Courses XI, XIII and XV.—*Ironwork*.—Senior year. These are elective courses and follow course IX. The work consists of constructing parts of machines, repair work, and making tools for the shops. Five hours a week throughout the year.

MECHANICAL ENGINEERING.

Courses I, II and III.—*Mechanical Drawing*.—Sophomore year. In these courses the student begins at once to make mechanical drawings of simple objects and finally makes sketches of machines from which working drawings are made. Ten hours, the first term; five hours the second term and three hours the third term.

Course IV.—*Mechanism*.—Junior year; third term. This course treats of the motion of machine parts, and is introductory to the course in machine design. Five hours a week.

Courses V and VI.—*Descriptive Geometry*.—Junior year; first and second terms. The work in these courses is largely drawing. It involves the solution of problems in projection and intersection of lines, surfaces and solids. Five and three hours a week respectively.

Course VII.—*Steam Engines and Boilers*.—Junior year; third term. A study of the construction, care and operation of steam engines and boilers; recitations and lectures. Four hours a week.

Course IX.—*Thermodynamics*.—Senior year; first term. Steam and other engines considered as heat engines. Two hours a week.

Courses VIII, XII and XIV.—*Mechanics of Engineering*.—Senior year. A course in applied mechanics. The first two terms are occupied with a discussion of statical and dynamical problems. During the last term the strength of materials is studied with special reference to beams, girders and trusses; also the mechanics of fluids relating to pressure, flow and carrying capacity of pipes and open ditches. Open only to those who have completed Mathematics VIII and IX. Five hours a week throughout the year.

Courses XI and XV.—*Machine Design*.—Senior year; second and third terms. A course applying the principles brought out in the courses in mechanism and mechanics to the design and construction of machine parts. Numerous practical problems are solved, the data for many of them being taken from machines used in the college, so that the student may compare his results with those used in practice. Considerable draughting is done in connection with this course. Seven hours a week.

PHYSICS.

Courses I and II.—*Elementary Physics*.—Sophomore year; second and third terms. These courses cover the usual topics of mechanics, heat, electricity and magnetism, sound and light. Instruction is given by means of lectures and recitations, alternating with laboratory practice. Seven hours a week.

Course III.—*Physics*.—Senior year; first term. A laboratory course, which is a continuation of the preceding courses, and deals more especially with experiments in

heat, light, sound and electricity. Seven hours a week.

ELECTRICAL ENGINEERING.

Courses I, II and III.—*Electricity and Magnetism*.—Junior year; first, second and third terms. Dealing with the general theory of electricity and magnetism and their most common application; such as the telephone, telegraph, electro-plating, electric lighting, etc. In the laboratory the student becomes familiar with the usual measurements employed by the electrical engineer. Special attention is given to the calculation of magnetic circuits, thus leading up to the course in dynamo design. Lectures, recitation and laboratory work. Seven hours a week first and second terms; three hours third term.

Courses IV, V and VI.—(a) *Alternating currents*.—Senior year; first term. Being a brief development of the elementary theory of alternating currents, using both the graphical and analytical methods of calculation. A continuation of courses I, II and III. Open only to those who have completed Mathematics VIII and IX. Lectures and recitations. Three hours a week.

(b) *Dynamo Design*.—Second term.—Theory and practice of the design of direct and alternating current dynamos and motors, including calculation and construction of field magnets, armatures, commutators, etc. Lectures and recitations, supplemented by the making of models in the laboratory. Three hours a week.

(c) *Practical Electrical Engineering*.—Third term.—Considerable time will be devoted to practical engineering problems, such as the calculation of circuits, installation of lighting and power plants, power transmissions, etc. Three hours a week.

(d) *Laboratory*.—An advanced course, being a continuation of the laboratory work carried on in courses II and III, including, in addition to the more common measurements, the measurement of insulation resistance, location of faults in cables, and construction of apparatus. Four hours a week throughout the year.

CHEMISTRY AND PHARMACY.

A. L. KNISELY, M. S., Professor,
JOHN FULTON, B. S., Assistant Professor.
C. M. MCKELLIPS, PH. G., PH. C., Instructor.
FRANK E. EDWARDS, B. M. E., Instructor,

CHEMISTRY.

The study of chemistry is begun in the first term of the sophomore year.

Course I.—*General Inorganic Chemistry*.—Non-metals.—Sophomore year; first term. A daily exercise throughout the first term is devoted to recitations, lectures and laboratory practice. In this course special attention is given to the fundamental principles of the science, which are suitably illustrated either by experiments performed by the student in the laboratory, or, when too intricate and expensive of time, by the instructor before the class in the lecture room. The elements are discussed individually as well as their more important compounds.

The *practicum* of this course consists of a series of laboratory exercises dealing with the elements studied and is designed to introduce the student to chemical manipulation. Seven hours a week.

Course II.—*General Inorganic Chemistry*.—Sophomore year; second term. The study of the metals is entered upon in the second term and is conducted similarly to the study of the non-metals. The more important metals are individually discussed under the following heads: history, occurrence

in nature, properties, preparation, uses, tests, and compounds. Special attention is given to metals and their compounds which are of industrial importance.

The laboratory work of the second term consists of a study of the properties of the metals, being an introduction to qualitative analysis. This course must be preceded by Chemistry I. Seven hours a week.

Course III.—*Qualitative Analysis*.—Sophomore year; third term. The student is required to apply and study the reactions involved in the ordinary methods of separation and identification of substances. The study includes the reactions, ordinarily used in qualitative analysis, but deals with only those substances usually met with in chemical work. The student repeatedly works through a scheme of separation in making qualitative analyses of unknown substances. Prerequisite Chemistry I–II. Four hours a week.

Course IV.—*Agricultural Chemistry*.—Junior year; first term. This course deals with the more intimate relation of the science to agriculture. Such topics as soil composition, elements essential to plant growth, soil exhaustion, fertilizers; chemistry of cattle foods, nutrition, dairy products and food adulteration are dealt with as fully as time permits. Prerequisites, Chemistry I, II and III. Five hours a week.

Course XXI.—*Agricultural Chemistry*.—Junior year; second term. This is a continuation of course IV and extends through the second term. Five hours a week.

Course V.—*Quantitative Analysis*.—Junior year; third term. The student is required to make the ordinary fundamental determinations of moisture, aluminum, calcium, magnesium, copper, lead, potash, sulfuric acid, phosphoric acid, chlorine, and carbonic acid by gravimetric processes;

estimations by volumetric methods including alkalimetry, acidimetry, precipitation, and oxidation will be undertaken. The work is so planned as to familiarize the student with the standard gravimetric and volumetric methods. This is a required course for all pharmacy students and is elective for students who have completed chemistry I, II and III, or XV. Seven hours a week.

Courses VI, VII, VIII.—*Advanced Quantitative Analysis*.—Senior year; first, second and third terms. A continuation of course V. This work extends throughout the senior year and is arranged especially for students electing theses in the department of chemistry. Elective. Seven hours a week.

Course IX.—*Assaying*.—Senior year; second term. A course in practical assaying of gold, silver, iron, mercury and copper ores. Must be preceded by chemistry I, II, III, and mineralogy I. Elective. Six hours a week.

Course X.—*Assaying*. Senior year; third term. A continuation of course IX. Elective. Six hours a week.

Course XI.—*Chemistry of Common Life*.—Sophomore year; third term. This is a short course treating of organic compounds of common life. It alternates during the third term with course III. This work is required of all students in agricultural and household science courses. Prerequisites chemistry I–II. Three hours a week.

Courses XII, XIII and XIV.—*Chemistry of Foods*.—Senior year. An elective extending through the senior year in the household science course. It is an expansion of the work in course XI, but limited to a study of foods from a chemical and scientific standpoint. This work must be preceded by chemistry V. Seven hours a week.

Course XV.—*Qualitative Analysis*.—Sophomore year; third

term. This course is designed for pharmacy students. It gives practice in the analysis of unknown mixtures for both acids and bases with special reference to the needs of pharmacists. Prerequisites chemistry I-II. Ten hours a week.

Courses XVI, XVII.—*Medical Chemistry*.—Junior year; first and second terms. This subject is open only to students of the pharmacy course. It embraces inorganic and organic chemistry. Prerequisites I, II, XV. Five hours a week.

Courses XVIII, XIX, XX.—*Pharmaceutical Analysis*.—Senior year; first, second and third terms. This work consists of advanced qualitative and quantitative analysis, both organic and inorganic. Under this head is taken up the separation, identification and determination of the active constituents of alkaloidal drugs and galenical preparations. During the spring term practical laboratory work in Toxicology is given. Ten hours a week.

THESES.

Undergraduates desiring to elect theses in the department of chemistry and pharmacy must have passed in one course of quantitative analysis.

GRADUATE ELECTIVES.

Elective work in chemistry is offered as a major or a minor subject for two years to candidates for the degree of Master of Science.

Advanced Analysis.—This course is intended for those who may desire to specialize in chemical work. It provides a greater variety of analytical work than can be given in courses V, VI, VII, VIII. It offers the following: analysis

of limestone, coal, iron ores, milk, butter, cheese, water, urine, sugar, and various other materials. A student desiring to investigate along any particular line, as mineral, sanitary, or agricultural chemistry, may do so. This course is open as a major subject to students who have completed courses I, II, III, or XV and V, VI, VII and VIII. In addition, a parallel course of reading must be taken, upon which the student will be required to pass a satisfactory examination at the end of the year. The work of the last year will be left largely to the student's choice, subject to the approval of the head of the department, and will serve as the basis for a graduation thesis. Hours to be arranged with the instructor.

GEOLOGY.

Course I.—*Geology*.—Senior year; first term. The course opens with work designed to acquaint the student with the common rocks and minerals as to their physical characters and appearance. The geological and mineralogical cabinets offer abundant opportunity for the study of specimens. The remainder of the course consists in a study of the aqueous, atmospheric, igneous, and organic agents in the earth's history; the structure and arrangement of rocks and the order of succession of strata. Elective in the agricultural* and household science courses. Five hours a week.

MINERALOGY.

Course I.—*Determinative Mineralogy*.—Senior year; first term. An elective laboratory course open to seniors in both agricultural and mechanical courses. The student will make use of the blowpipe and reagents to determine and

classify the more common metal-bearing rocks, and the ordinary gangues. Elective. Six hours a week.

Course II.—*Metallurgy*.—Senior year; second term. The first part of the term will be devoted to the study of refractory materials, such as fire clay, etc., and to furnace construction. In the second part special attention will be given to fuels and to the proper methods of working metals and alloys. Seven hours a week.

PHARMACY.

Courses I and III.—*Pharmacognosy*.—Junior year; second and third terms. In these courses are considered both the gross structure and characteristics of the crude drugs and chemicals. The student is taught the appearance, taste, color, odor, fracture and habitat of the various crude drugs, and also receives careful drill on their Latin and English names. Special attention is directed toward the learning of the scientific classification of the vegetable drugs. The student has access to the specimens for study, and special effort is made to train the senses to the recognition of each of the drugs considered.

The pharmacognosy of the senior year consists in a thorough review of the work of the junior year and practice in the recognition of powders, liquids, chemicals, and pharmaceutical preparations. Two hours a week, Spring term.

Courses II, IV and VII.—*Pharmacy*.—Junior year. By means of a series of lectures and recitations during the first term, the student is made familiar with the nature and objects of the practice of pharmacy, as well as with the scientific principles underlying it. His attention is directed particularly to the various classes of Pharmacopœial prepa-

rations, beginning with those of the more simple character and gradually advancing until a thorough understanding is acquired concerning those of the most complex formulae.

Definitions are introduced wherever admissible, being supplemented by descriptive and theoretical considerations when necessary for a better understanding of the subject.

The work of the second and third terms is devoted largely to laboratory practice, during which time the student has ample opportunity for the practical application of the knowledge gained in the lecture room, and in the acquirement of pharmaceutical technique.

The preparations of the Pharmacopœia receive special attention, each student being required to make, independently, a sufficient number of these preparations to insure a thorough understanding of the processes and manipulations involved in their manufacture. Various unofficial compounds are also considered from time to time, especially those of the National Formulary.

The laboratory work is under the direct supervision of an experienced pharmacist and each student receives considerable personal attention. The character of the instruction is such as will be of much practical benefit to the student in the subsequent event of his becoming a dispensing pharmacist. Two hours a week, first term, and five during second and third.

Course V.—*Therapeutics and Doses*.—Junior year; first term. The therapeutical uses of medicines serve as a basis for classifying them in a manner which will facilitate study. The definitions of medical terms are given special attention in the junior year. In this connection the student also learns the minimum and maximum doses of all

remedial agents in active use in the modern practice of medicine. Two hours a week.

Course VI.—*Nomenclature*.—Junior year. In this connection the student is shown the practical application and use of the Latin language in the professions of medicine and pharmacy.

The Latin titles of the Pharmacopœia, National Formulary and the more common terms that occur in the prescription are made the subject of a series of recitations. One hour a week, first term.

Courses VIII and XIV.—*Materia Medica and Therapeutics*.—Senior year; first and second terms. All substances which find use in medicine are here studied one by one as to source, Latin and English names, formulæ (in the case of chemicals), compounds and preparations, properties, method of preservation, industrial and domestic use, impurities and adulterations, antidote (in case of poisons) and dose.

In the consideration of crude organic drugs, attention is especially directed to the constituents responsible for the medicinal activity of the drug, e. g., alkaloids, glucosides, volatile oils, etc. Three hours a week.

Course IX.—*Operative Pharmacy*.—Senior year; first term. This course is a continuation of that of the junior year and includes such preparations of the Pharmacopœia and of the newer classes of remedies as were not considered in the junior year. Attention is given to the manufacture of the more difficult preparations, both galenical and toilet, and to the correct methods of manipulation involved in preparing medicines for dispensing in cachets, soft capsules, etc.

The composition of the more important Pharmacopœial preparations, and of the percentage strength of the active constituents of each, are made the subject of close study.

The work of the term ends with a final review of the entire subject of pharmacy. Six hours a week.

Courses X and XV.—*Prescription Practice*.—Senior year. The recitation work consists of reading, interpreting, criticising prescriptions and calculating doses. During the third term a series of general quiz recitations is held. This is preparatory to the State Board examination. Special attention is given to incompatibilities and to the solubility of chemicals. Unsightly, dangerous and explosive mixtures are also considered under this head. In this laboratory course and that of operative pharmacy the student gains experience for the prescription counter, learning the difficulties there met with and how best to overcome them. He also gains in manipulative skill in making extemporaneous preparations.

Each student is required to personally perform the operations under the direct supervision of the instructor. The student works not from book prescriptions, but from prescriptions written in the ordinary practice of physicians and found on file in the drug stores. Seven hours a week second term and eight hours a week third term.

Course XI.—*Pharmacognosy and Synonyms*.—Senior year; third term. The pharmacognosy of the senior year consists in a thorough review of the work of the junior year and practice in the recognition of powders, liquids, chemicals, and pharmaceutical preparations.

In addition to the knowledge of the scientific classifications of the medicines already considered up to this time, the student is further instructed regarding many "common names," or synonyms, in general use in the ordinary practice of pharmacy. Three hours a week.

Course XIII.—*Toxicology*.—Senior year; third term. The

important active poisons—both mineral and vegetable—are studied. Their physiological action, characteristic symptoms that follow their use, treatment and antidote are noted and commented upon. Attention is directed to the conditions and regulations provided by the Oregon Pharmacy law for the handling and sale of poisons within the state. One hour a week.

From time to time special lectures are given on hygiene, pharmaceutical jurisprudence, etc.

STATE EXAMINATION AND REGISTRATION.

At its meeting held on December 14, 1898, the Oregon State Board of Pharmacy passed the following resolutions endorsing the course here offered:

WHEREAS, The Oregon State Agricultural College has established a course in pharmacy and chemistry that meets with the hearty approval of this Board, inasmuch as it offers a large proportion of practical work; therefore, be it

Resolved, That the Oregon State Board of Pharmacy acting in accordance with Sections 5 and 6 of the Oregon Pharmacy Law as amended, grant to students of the Oregon Agricultural College, who complete the full course and hold a diploma from said institution, after they shall have been subjected to such examination, at Corvallis, Oregon, as this Board may approve, on the completion of the senior year, a certificate to act as a registered pharmacist in this state.

Provided, That any student who may have taken the last two years of the course only and who does not hold the regular diploma from the said institution, on passing the examination aforesaid shall only be granted the certificate of a registered assistant.

The training in the pharmaceutical course is largely conducted in the laboratory for it is only by this means that the student can form an intimate personal acquaintance with the material and the best methods of manipulation. Thus it is that he receives systematic practice in dispensing, in the examination of drugs as to identity, purity, and strength, and in the manufacture of various preparations from crude drugs. The requirements of the U. S. Pharmacopœia are always kept in mind, and the student is always held strictly responsible for the purity of his prepa-

rations and the accuracy of his work. The course aims to teach students facts and principles of immediate use in the drug store, adapting the work to the needs of the practical pharmacist and manufacturing chemist. It is, however, further recognized that a thorough foundation must be laid for this work, and in view of this, two years of preparatory work are required in the college, or its equivalent in some other school. Students who have had equivalent work elsewhere can complete the course in pharmacy in two years.

EXPENSES.

Tuition is free at this institution, but to cover the cost of material used and wasted in the laboratories a small laboratory fee and a deposit for breakage will be charged in the chemical and pharmaceutical laboratories as is the custom in all institutions. These fees are payable each term strictly in advance.

Chemical laboratory: General Inorganic:

Material.....	\$1.50
Deposit for breakage.....	1.50

Junior and Senior Years:

Material.....	\$3.00
Deposit for breakage.....	2.00

Pharmaceutical Laboratory:

Material.....	\$3.00
Deposit for breakage.....	2.00

Assaying Laboratory:

Material.....	\$3.00
Deposit for breakage.....	2.00

Laboratory work accompanying theses:

Material.....	\$3.00
Deposit for breakage.....	2.00

Text and reference books in chemistry: General Chemistry, Newell, Young; Qualitative Analysis, Johnson and Prescott, Irish; Quantitative Analysis, Smith and Cheever;

Agricultural Chemistry, Johnson; Organic Chemistry, Remsen; Roscoe and Schorlemmer, Watt's Dictionary of Chemistry, Thorpe's Dictionary of Applied Chemistry, Thorpe's Industrial Chemistry, Wiley's Principles of Agricultural Chemistry, Fresenius, Crooke's Select Methods, Sutton's Volumetric Analysis, Stillman Engineering Chemistry, Official Methods, etc.

Text and reference books in pharmacy and materia medica: Handbook of Pharmacy, Coblenz; Practice of Pharmacy, Remington; Quantitative Analysis, Sturmer and Vanderkleed; Organic Analysis, Prescott; The Art of Compounding, Scoville; Medical Chemistry, Barclay; Materia Medica, Culbreth; same, White and Wilcox; Dose Book, Hoak; U. S. Dispensatory; King's Dispensatory; U. S. Pharmacopœia; same, of Homœopathy; National Formulary. Numerous other books and trade journals are to be found in the college library and are accessible to students.

ENGLISH LANGUAGE AND LITERATURE.

F. BERCHTOLD, A. M., Professor.

IDA B. CALLAHAN, B. S., Assistant Professor.

English as a required study is found extending in most of our courses to, and including part of, the junior year. It is offered as an elective in two terms of the junior year, and in the senior year.

Courses S., B., F.—The course in preparatory English is designed to secure accuracy and freedom in expression. There is work in spelling, writing and simple grammatical constructions. Written exercises prepared under rules of form are constantly required to obtain practice and secure confidence in expression. Reed and Kellogg, "Higher Lessons in English." "Seventy Lessons in Spelling."

It is well understood that the art of using one's native tongue correctly and forcibly is acquired for the most part through imitation and practice, and is not so much a matter of knowledge as of habit. To become familiar with good use, we must read the best literature; a student familiar with the best language of reputable writers and speakers will use good English without conscious effort. Indeed, good reading is indispensable to good speaking or writing; and rules and dictionaries are of little benefit without it.

Throughout the courses, therefore, there is required an amount of collateral reading equivalent to two books per term, or six per scholastic year. The student prepares

condensive abstracts of these books, and supplements this work by selecting and memorizing from each book six short quotations embodying general truths.

The books to be read and studied in the Subfreshman year are: Deïoe's "Robinson Crusoe;" Bunyan's "Pilgrim's Progress;" Hughes' "Tom Brown's School Days;" Edward Everett Hale's "The Man Without a Country;" R. D. Blackmore's "Lorna Doon;" G. W. Cable's "The Cavalier."

A printed list of one hundred selected books, intended for the use of the collegiate classes, may be obtained from the librarian. The books to be read will be chosen after consultation with the professor in charge.

Courses I, II, III.—*Composition and Rhetoric*.—Freshman year; first, second and third terms. Review of English grammar; review of punctuation. Description; narration. Collection of material for a theme. The study of words, the sentence, the paragraph. Figures of speech. The burden of these courses is description and narration. Extracts from classic literature are read and analyzed in class. Written reports are handed in, giving distinctive features in the description or method of movement in the narration. Short descriptions and narrations are written on demand in the class under limit. There are also constant recitations and exercises under grammatical rules and constructions to secure order and accuracy. The work, here as well as in all other courses in English, is done with a view to the increase of the student's vocabulary, and to develop ease and exactness of expression in his compositions. Lockwood and Emerson's "Composition and Rhetoric." Collateral reading.

Courses IV, V.—*Rhetoric*.—Sophomore year; first and second terms. This course is carried on co-ordinately with

Genung's Rhetoric. It emphasizes Criticism, Exposition and Argument.

Six formal papers are required during the year. The subjects are assigned and the methods follow principles laid down by Genung, and Lockwood. Much attention is given to definition of terms and to making clear expositions of ideas contained in paper.

By way of review many short exercises are also written under the simple fundamentals of composition and in study of sentence and paragraph structure. Collateral reading.

Course VI.—*English Literature*.—Sophomore year; third term. The long course of English literature necessitates the division of it into a number of periods marked by the presence of new and weighty influences. In each period there are a few writers that stand, by reason of their ability and enduring work, in positions of recognized preeminence. We aim to extend the study of the works of such writers—our classic authors—sufficiently far to include considerable fulness of biographical and critical detail.

Formative Period.—Chaucer, "Canterbury Tales:" Prologue and Knight's Tale.

First Creative Period.—Spencer, "Fairy Queene." Cantos I and II. Bacon, Essays. Shakespeare, "Merchant of Venice." Collateral reading.

Courses VII and VIII.—*English Literature*.—Junior year; first and second terms. Civil War Period: Of Milton's minor poems: "L'Allegro" and "Il Penseroso." The Restoration: Dryden, selections. Queen Anne Period: Addison, "Sir Roger De Coverley." Pope, selections. Age of Johnson: Burns, selections. Goldsmith, "The Deserted Village. The Nineteenth Century: Scott, Byron, Wordsworth, Tennyson. Selections from each. Collateral reading.

Courses IX and X.—*American Literature*.—Junior year; third term, and senior year, first term. A study of the leading periods and principal writers of American literature, with particular emphasis of what is usually termed the First National Period, representing such authors as Irving, Cooper, Bryant, Poe, Emerson, Hawthorne, Longfellow, Lowell, Whittier and Holmes. Collateral reading as in other courses in English.

Courses XI and XII.—*Elective Courses in English Literature*.—Senior year; second and third terms. A critical study of four or five representative plays of Shakespeare and selections from Wordsworth, Tennyson and Browning. Papers on assigned topics and reports upon collateral reading are required throughout the courses.

MATHEMATICS AND ENGINEERING.

GORDON V. SKELTON, C. E., Professor.

CHARLES L. JOHNSON, B. S., Instructor.

The course in Mathematics includes such of its branches as the distinctive aims of this institution require, and conforms itself, in general, to that in use in the most successful agricultural colleges.

That the study may to the fullest extent strengthen and discipline the mind for connected, logical thought, thoroughness and accuracy are insisted upon at all times. In the class-room all principles and demonstrations must be presented in an orderly and logical manner. The constant aim is to cultivate the powers of insight, judgment, and originality.

Course I—*Algebra*.—Freshman year; first term. From quadratic equations on. This course is open to students who have completed the sub-freshman work and to new students who can satisfy the department that they are prepared for the work. A review of about ten days will be devoted to the topics that precede quadratic equations. Five hours a week.

Course II—*University Algebra*.—Sophomore year; second term. From ratio and proportion to theory of numbers. This course is open to all students who have successfully passed course I. Five hours a week.

Course III—*University Algebra*.—Sophomore year; third term. From the theory of numbers on. This course is open

to students who have had courses I or II or their equivalent. Five hours a week.

Course IV—*Plane Geometry*.—Freshman year; second term. This course includes all that is found in the first four books of plane geometry in any standard text, as Wentworth's. Special emphasis is laid upon definitions and principles. Original demonstrations are given and much time is devoted to "original" theorems and problems and at all times proofs and demonstrations are freely criticised and discussed in the class-room. Five hours a week.

Course V—*Plane, Solid and Spherical Geometry*.—Freshman year; third term. This course includes book V of plane geometry and all of solid and spherical geometry. Students must have had course IV before taking this. Five hours a week.

• Course VI—*Trigonometry*.—Sophomore year; first term. Students must have had courses I, IV and V before taking this. Only enough time is given to spherical trigonometry to enable the student to solve the spherical triangle. Much time is devoted to practical triangulation and measurements. The department is supplied with all the necessary instruments which the students use under the direction of the instructor. The college has two most carefully measured base-lines, one 640 feet and the other 1000 feet long, which are used in the triangulations. Five hours a week.

Course VII—*Plane Analytical Geometry*.—Junior year; first term. This work is required of all students taking the mechanical and electrical engineering courses. The work embraces the subjects treated in Nichols' Analytics. Five hours a week.

Course VIII—*Differential Calculus*.—Junior year; second term. This course is required of the same students as is

course VII. Among the topics considered are differentiation and applications, evaluation of indeterminate forms, expansion of functions, Taylor's and Maclaurin's theorems, maxima and minima, points of inflection, curvature, change of independent variable, functions of two or more variables, asymptotes, curve tracing, etc. Five hours a week.

Course IX—*Integral Calculus*.—Junior year; third term. Among the topics considered are direct integration, definite integrals and applications, integration of rational fractions, integration by rationalization, integration by parts, integration of trigonometric forms, etc.; applications to finding the lengths and areas of curves, surfaces and volumes of solids of revolution, etc.; double and triple integration and applications. In this course, as in course VIII, great stress is laid upon practical applications, and a large number of practical problems are solved. Five hours a week.

Course X—*Surveying*.—Sophomore, Junior and Senior years; third term. The greater part of the time is spent by the student in the field with the various instruments. He is required to make surveys from descriptions given him as well as to write descriptions from surveys made by himself. In all cases notes must be carefully kept and worked up in the office.

The engineering department is equipped with the necessary instruments, including a railroad compass, two transits with solar attachments, plane-table, Y level, hand-level, rods, chains, tapes, etc.

Course XI.—*Astronomy*.—Senior year; third term. That this most elevating and refining subject may be open to a greater number of students, it will be confined to descriptive astronomy and may be taken by students who have com-

pleted courses I to V, inclusive. Much time will be devoted to uranography. Five hours a week.

Course XII.—*Agricultural Engineering*.—Senior year; third term. This course is open to students who have completed course X. Under this head will be given instruction in road location and construction, including consideration of various road materials; designing of highway bridges; inspection of existing structures; designing, locating and constructing agricultural drainage systems; laying out farm buildings, etc. Instruction given in the class-room will be applied wherever possible. Five hours a week.

Course XIII.—*Mine Surveying*.—Junior year; first term. The instruments and their adjustments, form of field notes, maps and their construction, methods of connecting underground surveys with the surface, methods of traversing underground, etc., will be considered. This work must be preceded by course X. Three hours a week.

Course XIV.—*Tunneling and Leveling*.—Junior year; second term. The various problems of alignment, grade, and constructive details of tunneling and underground work will be considered. Much time will be devoted to the survey, location and construction of hydraulic works. Five hours a week.

Course XV.—*Mining Engineering*.—Senior year; third term. The subjects treated are the planning and laying out of framed structures, power plants, roads, dams, reservoirs, and hydraulic engineering works, etc. Five hours a week.

ZOOLOGY.

A. B. CORDLEY, M. S., Professor.

W. T. SHAW, B. Agr., M. S., Assistant.

The work in this department is designed to give the student that knowledge of biological laws which is to-day regarded as an essential part of a liberal education. It aims to create a growing interest in the study of our native birds, insects and other animals and their interrelations with one another, with native and cultivated plants and with rural life; to give a knowledge of the foundation facts of morphology and physiology on which depend many of the principles of scientific stock breeding and feeding, of veterinary science and of human physiology and hygiene; and above all from an educational standpoint, it aims to train the student's perceptive faculties, to teach him to see, to do and to reason from observed facts.

The laboratories of the department occupy six rooms on the third floor of the agricultural building. They are well supplied with necessary apparatus including compound and dissecting microscopes, camera lucidas, eyepiece and stage micrometers, an automatic microtome, dissecting sets, dry and steam sterilizers, incubators, reagent sets and numerous smaller articles, all of which are for the use of students.

For the purpose of illustration there are in addition to the general museum and the entomological collection a set of the celebrated Leuchart zoological charts, enlarged dissectable models of the human ear, eye, heart, brain and larynx and a large series of microscopic mounts.

The general museum, which occupies the main part of the fourth floor of the agricultural building, also contains a small but typical collection of mounted mammal skins; a collection of mounted skins of native birds; a collection of mounted bird skins from Alaska; a collection of more than one hundred species of eggs of native birds; a small collection of fishes and reptiles; a considerable number of marine invertebrates, including a small but beautiful collection of Philippine shells; a small but interesting collection of skulls and disarticulated and articulated skeletons; and the largest collection of Oregon insects in existence.

Course I.—*Invertebrate Zoology*.—Sophomore year; third term. A course devoted principally to the morphology, physiology and ecology of invertebrates. Particular attention is given to the study of the single celled forms since it is believed that the student can thus best gain an insight into the structure and physiological activities of the higher animals. Some of the types studied are the amœba, paramœcium, vorticella, sponge, hydra, starfish, crawfish, earthworm, mussel and grasshopper. Required in the agricultural, household science, pharmacy and commercial literary courses. Seven hours a week. Laboratory deposit, \$3.00.

Course II.—*Entomology*.—Junior year; first term. A study of the structure, classification and habits of insects, with particular reference to those which are beneficial or injurious. Instruction is given in methods of collecting, mounting and studying the life-histories of insects and in the preparation and use of insecticides. Required in the agricultural, household science and commercial literary courses. Prerequisite, course I. Seven hours a week. Laboratory deposit, \$1.00.

Course III.—*Vertebrate Zoology*.—Junior year; second

term. A course devoted principally to the morphology and physiology of vertebrates. A careful comparative study is made by dissections of several vertebrate types, particular attention being given to the Guinea pig as a type of the mammalia. The relation of function to structure is kept constantly in mind throughout the course which thereby becomes valuable as an introduction to the study of human physiology and veterinary science. Required in the agricultural, household science, pharmacy and commercial literary courses. Seven hours a week. Prerequisite, course I. Laboratory deposit, \$3.00.

Course IV.—*Physiology*.—Junior year; third term. A course in human physiology designed for students having a knowledge of general biology and of vertebrate anatomy. The student should also possess some knowledge of chemistry and physics. Required in courses in agriculture, household science and pharmacy. Prerequisites, courses I and III. Five hours a week.

Course V.—*Physiology*.—Junior year; second term. A course in the elements of human anatomy and physiology designed for students with no previous biological training. Text-book, lectures and demonstrations. Martin's Human Body. Required in the course in mechanical engineering. Five hours a week.

Course VI.—(a) *Evolution*.—Senior year; first term. A course of lectures and collateral reading on organic evolution; covering such topics as the evolution of evolution, variation, struggle for existence, heredity, etc. Prerequisites, courses I and III. Two hours a week. Elective.

(b) *Systematic Zoology*.—A discussion of the principles of zoological classification with particular reference to species

of economic importance. Prerequisites, courses I and III. Three hours a week. Elective.

(c) *Advanced Entomology*.—A laboratory study of some restricted group of insects, of some particular species of economic importance, or of the insects affecting some particular crop. In this course students have free access to the collections and the library and records of the experiment station. The course extends throughout the year. Prerequisites, courses I and II. Seven hours a week. Elective.

Course VII.—(a) *Histology*.—Senior year; second term. A course of laboratory practice in fixing, hardening, imbedding, sectioning, staining, mounting and studying the tissues of the higher animals. Prerequisites, courses I and III. Seven hours a week. Elective.

(b) *Advanced Entomology*.—A continuation of course VIc.

Course VIII.—(a) *Embryology*.—Senior year; third term. Mainly a laboratory course in the study of the development of the frog and the chick, supplemented by a study of the general facts and principles of embryology. Prerequisites, courses I, III and VIIa. Seven hours a week. Elective.

(b) *Advanced Entomology*.—A continuation of courses VIc and VIIb. Seven hours a week. Elective.

BOTANY AND HORTICULTURE.

EDWARD R. LAKE, M. S., Professor.

BOTANY.

The aim of the regular course in botany is to give the student such a working knowledge of plants and plant-life as will enable him to intelligently consider the various problems of vegetable life on the farm, in the garden or forest.

The student is taught to observe plants; to become familiar with them through a working association; to ascertain by actual field work and observation what plants do, and what relations they bear to each other, and to other forms of life.

The chief features of the work in this subject are field and laboratory exercises, supplemented by lectures and recitations. Text and reference books are used merely as guides, or for the purpose of furnishing suggestions to the end that the student may be the better enabled to make the field, garden, greenhouse and laboratory work the more effective.

The department has a good working equipment for the courses outlined. Individual sets, comprising dissecting and compound microscopes, laboratory glassware and other apparatus are supplied each student at a moderate rental fee. The collection of mounted and unmounted plants, especially rich in Oregon types, together with charts, models and preserved specimens furnish ample material for both the regular and special advanced work in the several courses.

Course I.—*Plant Morphology*.—Freshman year; third term. Laboratory and field exercises, together with recitations. The gross structure of our common flowering plants is the main topic of the term's work, though incidentally germination, growth, fertilization and fructification are considered. Each student is required to collect, mount, label and classify a century of the common field plants, and 10–25 samples of seeds of native plants. Seven hours a week. Laboratory deposit, \$1.00. Leavitt, *Outlines of Botany*; Coulter, *Plants*.

Course II.—*Plant Histology*.—Sophomore year; first term. Laboratory work with the dissecting and compound microscopes. The exercises of this course cover the minute structure of the higher plants, together with a brief consideration of the lower forms of plant life. Seven hours a week. Laboratory deposit, \$2.50. Coulter, *Plants*; Strassburger and Hillhouse, *Practical Botany*.

Course III.—*Plant Physiology*.—Junior year; first term. Laboratory exercises and recitations. The subject is considered with special reference to the needs of the agriculturist and horticulturist. The principal part of the discussion is upon those phases of the subject that bear directly upon our cultivated crops. Seven hours a week. Laboratory deposit, \$3.00. Sorauer, *Physiology of Plants*; McDougal, *Plant Physiology*.

Course IV.—*Plant Classification*.—Junior year; third term. This course is designed to meet the demands of the pharmacist for a working knowledge of plants in general. Much stress is laid upon field and laboratory work. Plant relationships, plant societies, regional types, plant products, the medicinal and poisonous species of our common plants, together with a discussion of the various parts of plants used

in pharmacy are some of the topics considered during the term's work. Required in the course in pharmacy. Seven hours a week. Laboratory deposit, \$1.50.

Course V.—*Plant Pathology and Hygiene*.—Senior year; first term. Laboratory and field work supplemented by lectures and recitations. The common fungous foes of the cultivated field, orchard and garden crops, together with the means of prevention and remedy are considered at length. Seven hours a week. Elective. References, Lodeman, Weed and Massee.

Course VI.—*Plant Products*.—Senior year; second term. Economic plants and their various preparations and uses. History, development, and distribution of the plants that furnish the world with its chief supply of material for food, shelter, clothing, fuel, medicine and the arts. Elective. Seven hours a week.

Course VII.—*Systematic or Cryptogamic Botany*.—Senior year; third term. The work of this course is arranged to meet the needs of those electing it. In the systematic work, the student collects and classifies a hundred or more of the local plants, giving data as regards habitat, and distribution, and prepares a synopsis of the orders considered and species collected. Some time is also devoted to a study of current botanical literature.

In the cryptogamic work, the exercises are confined chiefly to a study of the comparative morphology of the fungi, algæ and other flowerless forms of plant life. Seven hours a week. Elective. Laboratory deposit, \$2.50.

The laboratory deposits in courses I, II, III, IV, VII, VIII, IX, X and XI are required of all students, and are made to cover possible loss and breakage of apparatus used. At the close of each term such balance as may remain, is re-

turned to the student. All deposits are required to be made in advance.

Course VIII.—*Forestry*.—Senior year; first term. Lectures, laboratory exercises and field work. The topics of the course are: Pacific coast forests; areas, type trees, and products; forest trees, chief characteristics, particular uses, and identification. Five hours a week. Elective.

Course IX.—*Forestry*.—Senior year; second term. Lectures. Forest culture; forest management; forest protection; forest laws. Five hours a week. Elective.

Course X.—*Forestry*.—Senior year; third term. Lectures, laboratory exercises and field work. Plant diseases, especially those affecting forest trees. Fungous foes of timber. Timber preservation. Seven hours a week. Elective. Laboratory deposit, \$2.50.

Course XI.—*Construction of Woods and Metals*.—Senior year; second term. A course designed to supply the student with a practical knowledge of the minute structure of the leading kinds of timber and metals used in construction. No better designs of structures for strenght, elasticity, buoyancy, compactness and rigidity are offered than those devised by nature for use in plant structures. The value of metals for constructive purposes depends very largely upon fibre, molecular structure and crystallinity. A microscopic examination of these features of metals gives the student an insight into the fundamental properties of these materials. Timber and metal diseases are considered at some length. Lectures and laboratory exercises. Seven hours a week. Elective. Laboratory deposit, \$2.50.

HORTICULTURE.

The work in horticulture is so arranged as to give the

student a working knowledge of the principles and practices of modern horticulture, especially applicable to Pacific Coast conditions and requirements.

The experiment station orchard of over two thousand fruit trees, shrubs and vines furnishes ample material for all phases of the work of the several courses.

Course I.—*Plant Propagation*.—Senior year; first term. House and field exercises in seeding, grafting, cutting, layering, pruning and budding, together with recitations. Two and one-half, or five hours a week. Goff, *Principles of Plant Culture*.

Course II.—*Plant Culture*.—Senior year; second term. Lectures and recitations on orchard, garden and vineyard fruit crops, including selection of soils, planting, cultivating, pruning, harvesting, storing and marketing. Two and one-half, or five hours a week. Bailey, *Principles of Fruit Growing*.

Course III.—*Plant Evolution and Improvement*.—Senior year; third term. Lectures and recitations covering the various phases of evolution as bearing especially upon our cultivated plants, together with a discussion of the principles and practices of plant breeding, and improvement by selection and cross fertilization. Five hours a week. Bailey, *Plant Breeding*; Bailey, *The Survival of the Unlike*.

ELOCUTION.

HELEN V. CRAWFORD, B. S., Professor.

“There is one accomplishment, in particular, which I would earnestly recommend to you, Cultivate assiduously the ability to read well. Good reading is the natural exponent and vehicle of all good things. It seems to bring dead authors to life again, and makes us sit down familiarly with the great and good of all ages.”

It is the purpose of this department to train the pupils to become thoughtful, intelligent, and agreeable readers. To give them the power to extract thought from the printed page, and by systematic drill both in physical culture and voice work to give them adequate vocal expression. To instil in the minds of pupils a love for good literature, and a genuine pleasure in interpreting and rendering the same.

Courses I and II.—*Elocution*.—Freshman year; first and second terms. Analysis and rendering. Voice culture, physical culture. Two hours a week. *Evolution of Expression*, Vol. I., C. W. Emerson.

Course III.—*Elocution*.—Sophomore year; first term. Voice culture, bodily expression, analysis and rendering. Two hours a week. *Evolution of Expression*, Vol. II., C. W. Emerson.

Junior year.—Rhetorical exercises will be required first term of junior year.

Courses IV, V and VI.—*Advanced Elocution*.—Senior year; first, second and third terms. Voice culture, rhythmic movements, literary analysis and rendering. Elective. Two hours a week. *Evolution of Expression*, Vol. III., C. W. Emerson.

FLORICULTURE AND GARDENING.

GEORGE COOTE, Professor.

W. T. JOHNSON, B. S. A., Assistant.

Instruction in floriculture is given to the classes in household science. Floriculture is intended to acquaint students with the habits and requirements of the many hardy plants for outside decoration and also with the propagation and management of tropical and subtropical varieties. Thus students are enabled to acquire considerable insight into the proper care of greenhouses. In order that this plan may be carried into effect, lectures supplemented by practical work in the propagation, potting and care of plants, are regularly given to the classes.

Course I.—Sophomore year; first term.—Propagation of spring and summer plants for adorning the home grounds.

Course II.—Senior year; third term.—Propagation of soft wooded plants, care of greenhouse, propagation and care of winter flowering plants.

Course III.—Senior year; first term.—Vegetable Gardening, elective.—Location and soil, irrigation and rotation of crops. Harvesting. Care of seeds; improvement of varieties.

The aim is to teach students to become successful cultivators. The instruction given is both practical and theoretical.

Course IV.—Senior year; second term.—Composting Manures. Application for early and late crops. Cultivation to develop plant food. Care of cold frames, and winter protection of young plants for early spring planting. The building of greenhouses for forcing vegetables.

Course V.—Senior year; third term.—Green's "Vegetable Gardening" will be used as a text-book.

Course VI.—Senior year; third term.—Landscape Gardening is treated as a fine art. Introductorily the arts of design in general are discussed. Then are discussed the principles, aims and methods of artistic gardening. The principles, when once understood, are applied to the embellishment of home grounds, cemeteries, parks and highways.

BACTERIOLOGY.

EMILE F. PERNOT, Professor.

Within the last decade bacteria have laid a very strong hold on the thought and imagination of the scientific world, and have come to be looked upon as playing a most important part, not only in the production of disease and in fermentation, but also in many everyday processes hitherto supposed to be dependent on very different causes.

In consequence of this, bacteriology has been raised to the dignity of a science, and its ramifications have become so numerous and widespread that many of the other sciences, and even some of the arts, have been freely pressed into the service of one or the other of its branches.

The study of bacteriology has made great strides both in the pathological and the technical branches of the subject; and just as investigations into the physiology of higher plants gave the first impetus to the establishment of agricultural experiment stations in all countries; so, in like manner, the physiology of fermentation and technical bacteriology have called into existence, within the last few years, a number of stations and laboratories for the development of those branches of industry wherein microorganisms play an important part.

This college has a well equipped bacteriological laboratory for the investigation and study of bacteriological diseases, both animal and vegetable.

The following courses of lectures and laboratory work have been added to the college curriculum as electives in the senior year.

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Course I.—*Bacteriology*.—Senior year; first term. A course in the elements of bacteriology, including lectures, and laboratory practice in sterilizing, making culture media, inoculating and growing cultures, studying cultural characteristics of certain definite species of bacteria, mounting, staining and examining slides, classification.

Course II.—*Dairy Bacteriology*.—Senior year; second term. Study of the bacterial diseases of milk, bacteria in the dairy, study of bacteria in butter making, and in cheese making. Study of yeasts and ferments.

Course III.—*Bacteriology*.—Senior year; third term. Lectures and laboratory work in pathogenic germ diseases of stock and poultry; a study of vaccines, their manufacture and use; of the nitrifying bacteria in leguminous plants; of bacteria in the soil and the bacterial analysis of water.

DRAWING.

FARLEY D. McLOUTH, B. S., Instructor.

Of the five senses, or gateways of knowledge, two, seeing and hearing, belong to the intellectual part of our nature, while the others chiefly supply our animal wants. The sense of seeing is at once the most active, the most comprehensive and the most intellectual of them all. It is the servant of the soul and through it we receive the richest ideas.

The chief aim of the course in drawing is to teach the student to see truly, to obtain quicker perceptions of the natural world and to preserve something of a true image of beautiful things that pass away. Few among us see truly what we see and then only what we have been educated to see. While no teaching can make an artist in the full sense of the word, any more than the study of the forms and methods of poetry can make a poet, yet drawing, as surely as rhetoric, should form a part of any thorough education; for besides the general quickening of perception and the training of the eye to accuracy of sight, it affords the means of noting the forms of objects such as no written descriptions can secure. At its lowest estimate it is an accomplishment perhaps larger in resources of pleasure than any other, while at its highest, it affords a mode of expression second only to language itself.

In considering the study of drawing, its importance is too often lost sight of, and yet it may be safely said that not only is drawing a corner stone in the foundation of an industrial education, but of a scientific education as well. In engineering courses, for instance, a knowledge of drawing is one of the first requirements.

In the first and second terms of the freshman year the work is confined entirely to outline drawing, realizing that as an aid in other branches of study, careful outline is of more importance than shading. Exactness of outline and accuracy of proportions are the aim.

Course I.—*The Elements of Drawing*.—Freshman year; first term. The work includes the first principles of drawing and of freehand perspective, drawing from simple block casts. Lectures. Three hours a week.

Course II.—*The Elements of Drawing*.—Freshman year; second term. A continuation of course I, drawing from casts. Lectures. Three hours a week.

Course III.—*The Elements of Drawing*.—Freshman year; third term. Everything that is seen in the world around us presents itself to our eyes in an arrangement of spots or patches of different colors variously shaded, or patches of light and shade, and to this course III is shaped making a decided change. To one not having a knowledge of the work, it might seem as though it were carried far to the other extreme, for now we use no outlines at all, but work in patches or spots, and give our attention to areas and values of light and shade. The work is from casts of geometric figures and from simple still-life studies. Students taking the mechanical or mining engineering courses are given two hours a week in machine sketching and light and shade drawing of machine forms. Lectures. Three hours a week and course II continued two hours a week.

Courses IV, V and VI.—*Advanced Drawing*.—Senior year. Facilities for advanced work are offered as an elective throughout the senior year. The work includes still-life, cast drawing, carried to the antique and leading to work from life as the pupil exhibits ability. Lectures. Five hours a week.

MILITARY.

MAJOR FRANK E. EDWARDS, O. N. G., Commandant.

The object of this department is so to instruct the cadet that upon graduation he will be thoroughly competent to hold a commission as a company officer in the national guard or volunteer army. Military drill improves the habits and manners of the student, develops him physically and gives him that military knowledge which it is desirable every citizen should possess that he may render intelligent aid to his country or state in time of need. It cultivates a manly spirit, ready and implicit obedience, respect for authority and self-restraint—all qualities of inestimable value to a young man.

Instruction in the course is prescribed for all undergraduate male students. All claims for excuses from military duties on the ground of physical disability will be referred to the physical director. Students excused from active military work may be assigned some light duty by the head of the department. The instruction is both practical and theoretical.

The battalion band, with twenty instruments, is under the instruction of a competent cadet officer as leader. Ordinarily no cadet will be assigned to the band until he is well instructed in the "school of the soldier" and the "school of the company."

The armory contains a drill room 70x100 feet in extent, an office, and suitable rooms for storing guns and other ord-

nance. Three hundred Springfield cadet rifles with equipments, two light artillery field pieces, twenty cavalry sabers, and a liberal allowance of blank and ball cartridges are furnished by the ordnance department, U. S. army. The college has purchased the necessary band instruments, swords, bugles, colors, and signal apparatus for the thorough equipment of the department.

It is the intention to hold an encampment for two or three days annually when suitable camp equipage can be secured. The first annual encampment was held in June, 1900.

The commissioned officers are selected from the senior class, the non-commissioned officers from the senior, junior and sophomore classes. Appointment of officers and non-commissioned officers and their relative rank, are determined according to the military standing of cadets based upon a careful consideration of the following points: (1) Knowledge of drill and duties as determined by examination, practical application and recommendations of superior officers; (2) zeal, soldierly bearing and aptitude for command; (3) character; (4) military record; (5) general standing in the college.

Cadets are required to wear a uniform at all drills and other military exercises. This uniform costs about \$16.50. It is of dark blue cloth of an excellent quality and makes a very neat and serviceable school suit.

Courses I, II, III, IV, V, VI, VII, IX, XI, XII, XIV, and XVI.—*Military Drill*.—Freshman, sophomore, junior and senior years. The practical course in infantry includes the schools of the soldier, company and battalion, in close and extended order; ceremonies; guard and outpost duty; target practice and battle tactics. In artillery it includes the schools of the soldier, cannoneer and platoon, dismount-

ed; the mechanism, nomenclature and care of the 3.2 inch breech-loading field pieces; the use of artillery in the field.

Those physically unable to bear arms, together with a limited number from the senior and junior classmen, may be assigned to the signal corps, and instructed in the usual methods employed in military signaling.

Courses VIII, X, XIII and XV.—*Military Science*.—Junior and senior years. The theoretical course embraces recitations in U. S. infantry and light artillery drill regulations, and outpost and guard duty manuals; instruction in reports and returns pertaining to a company; lectures on organization and administration of the U. S. army in peace and in war; the volunteers and militia; tactics, strategy and logistics, and other military subjects.

U. S. Infantry Drill Regulations; Blunt's Small Arms Firing Regulations; U. S. Light Artillery Drill Regulations; Gidding's Manual of Signaling; Burnham's Duties of Outposts and Manual of Guard Duty; Wagner's Elements of Military Science.

ROSTER.

Cadet Officers and Non-Commissioned Officers.

STAFF AND NON-COMMISSIONED STAFF.

W. E. Hanley.....	First Lieutenant and Adjutant
L. E. Kurtichanof	First Lieutenant and Quartermaster
V. C. Spencer.....	Sergeant Major
A. Starr	Quartermaster Sergeant

COLORS.

A. B. Bower.....	Color Sergeant
H. G. Pugh	Color Corporal
C. H. Lewis	Color Corporal

BAND AND FIELD MUSIC.

F. Steiwer	First Lieutenant and Leader
A. T. Bates	Drum Major
E. W. Yates.....	Chief Bugler

J. D. Zurcher.....	Sergeant
J. H. Gault.....	Sergeant
H. L. Fryer	Corporal
G. W. Crume.....	Corporal
G. Tuttle.....	Corporal
C. H. Woodcock.....	Bugler

ARTILLERY.

G. H. Thompson.....	First Lieutenant
E. P. Jackson.....	First Sergeant
I. P. Whitney	Sergeant
M. McAllister.....	Sergeant
F. M. Groshong	Gunner Corporal
E. Hinrichs	Gunner Corporal

INFANTRY.

"A" COMPANY.	"B" COMPANY.	"C" COMPANY.	"D" COMPANY.
<i>Captain:</i> A. E. Tulley.	<i>Captain:</i> C. W. Laughlin.	<i>Captain:</i> H. V. Tartar.	<i>Captain:</i> J. E. Smith.
<i>Lieutenants:</i> L. G. Mattley, F. C. Houston.	<i>Lieutenants:</i> H. L. Lusted, R. R. Howard.	<i>Lieutenants:</i> T. Bilyeu, A. M. Alspaugh.	<i>Lieutenants:</i> N. W. Leadbetter, A. E. McGillivray.
<i>Sergeants:</i> R. Billings, J. E. Johnson, F. M. Dempsey, B. W. Wilson, D. Hirstel.	<i>Sergeants:</i> E. H. Davis, E. Dyer, A. D. Gerking, J. Paulson, P. E. Clarké.	<i>Sergeants:</i> B. Mayfield, W. S. Wells, F. Carnahan, I. M. Underwood, S. L. Burnaugh.	<i>Sergeants:</i> E. B. Beaty, J. R. Howard, W. D. Jamieson, F. C. Pate, E. G. Wicklund.
<i>Corporals:</i> C. Buchanan, F. Fischer, F. Wann, A. S. Hall, R. Simeral, G. A. Cathey.	<i>Corporals:</i> J. M. Sweek, A. E. Belknap, C. C. Cate, C. L. Shepard, K. D. MacLean, B. G. Davidson.	<i>Corporals:</i> V. C. Staats, J. C. Clark, W. W. Henry, P. E. Cupper, T. W. Scott, A. E. King.	<i>Corporals:</i> J. Withycombe, M. M. Meiser, M. Wilkes, J. T. Witty, P. Wells, W. Weeks.

PHYSICAL CULTURE.

J. B. PATTERSON, A. B., Physical Director.

The aim of this department is to secure and maintain perfect health. To this end we strive to develop a symmetrical and graceful body. No pretense is made at developing actors, and no one is required to do what is known as "heavy work." However, there are always classes and special teams in various lines of artistic gymnastics, and those enjoying the work are welcome.

The chief aim is to benefit the weak and to guard against developing any tendencies to weakness or disease that so often exist. To this end every man entering the department is given a rigid physical examination. In these examinations the exact condition of the man is noted and special exercises are prescribed to meet his particular case. Records are kept making it possible by later examinations to note results of work and progress made.

The work is largely selected from the German and Swedish systems of gymnastics. A progressive course is followed. The class work which is carefully planned aims primarily to cure the common physical defects, such as narrow chest, stooping shoulders and weakened muscular system.

The gymnasium is well equipped for thorough work. The basement is provided with lockers and bath rooms for both men and women. The main floor is equipped with horizontal bar, parallel bars, buck, horse, rings, ladders, trapeze, dumb-bells, clubs, wands and other apparatus. East of the gymnasium is a large athletic field, with a quarter-mile track, 100-yard straight-away track, tennis courts and baseball grounds.

MINES AND MINING.

JOHN FULTON, B. S., Mineralogy and Assaying,
GRANT A. COVELL, M. E., Mechanics and Mechanical Engineering.
GORDON V. SKELTON, C. E., Mathematics and Mining Engineering.
ABRAHAM LINCOLN KNISELY, M. S., Chemist.

Instruction is given in this department to familiarize the student with the most approved methods of successfully carrying on mining operations as practised on the Pacific coast. The student is taught the uses of the various surveying instruments and is given ample opportunity for practical application in both field and mine surveying.

For courses in mine surveying, leveling, tunneling, etc., see page 101.

The student is also taught how to care for and handle such machinery as boilers, engines, motors, pumps, hoists, etc., by practical study and use in the machine shops. Abundant facilities for such instruction are offered here.

For description of equipment of the mechanical department see pages 77 and 78.

The courses in chemistry are practically the same as those for the mechanical student, excepting that an additional term in qualitative analysis is required of the mining student.

The courses in mineralogy are largely laboratory practice, and consist to a great extent of blowpipe-analysis of most of the metal-bearing rocks. The student is also taught how to recognize specimens in the field by aid of simple instruments, such as the pocket knife, lens, and small acid bottle.

The study of economic geology is also fully considered in this department, and much assistance may be derived by study of specimens in the mineral cabinet.

The courses in assaying cover analysis of gold, silver, mercury and lead ores, by the fire or dry assay, and the estimation of copper, iron, and zinc, by the volumetric or wet assay.

Instruction in rapid estimations of various metals is also given when time permits.

The equipment of the assay laboratory consists of one simplex ore crusher, one wall cupel machine, one Becker button balance, one Spohrhaese button balance, two pulp scales, one bucking board, two crucible furnaces, two muffle furnaces, one combination muffle and crucible furnace. All above furnaces are heated by Hoskins' gasoline burners, supplied by pressure from one fifteen-gallon pressure tank. In addition, there are furnaces for coal or coke, both stationary and movable, anvils, moulds, tongs, scorifier-crucible and cupel-hand cupel machines, etc.

Nothing has been omitted in the equipment of a first class assay laboratory, so that students completing the full course will have no difficulty in taking up the duties usually incumbent upon the assayer.

LITERARY COMMERCE COURSE.

T. H. CRAWFORD, A. M., Professor.

J. B. HORNER, A. M., Penmanship.

HELEN L. HOLGATE, B. H. E., Stenography and Typewriting.

This course leads to the degree of B. S. Those who complete the first two years—freshman and sophomore—and in addition the subjects of commercial law, civics, and economics, will receive a certificate to that effect.

A small fee will be charged for the use of the College typewriting machines.

The requirments for entrance to this course are the same as those for entrance to any one of the Freshman years in other courses. See page 24.

One of the most attractive features of this course is the prominence given to English. Every term in the entire four years—with one exception—presents the subject of English—making this emphatically a literary course.

Along commercial lines, the subjects of book-keeping, stenography, typewriting and commercial arithmetic are made prominent in the freshman and sophomore years and in the junior and senior years commercial law, civics and economics are studied.

In mathematics—in addition to commercial arithmetic—there are algebra and geometry, All the mathematics come in the first two years.

During the junior and senior years either Latin or German is studied continuously. In these years will also be found the subjects of entomology, vertebrate anatomy, general and modern history, aesthetics, psychology and astronomy.

THE EXPERIMENT STATION.

The station bears an important relation to the college, as the scientific investigations conducted at the station strongly support the instruction given in the class-room. Aside from the original investigations of an economic significance to agriculture, the work of the station affords daily object lessons in good modern farming.

About one hundred acres of the college farm are devoted to scientific and experimental farming. Animal husbandry is an important feature of station work. For this branch of the work Shorthorn and Jersey cattle, Cotswold and Shropshire sheep, and Berkshire swine are maintained. Among these, animals can be found of rare individual excellence, thus offering to the student in agriculture an opportunity to study the highest types of the respective breeds.

Extensive field trials are made in the growing of many varieties of cereals, grasses and forage plants, which are utilized in various feeding experiments conducted for the purpose of determining their value as stock foods. This work embraces the study of plant environment and the correlated subject of animal nutrition, thus supporting in a practical manner the science of agriculture as taught in the college.

Dairying is also a prominent feature of the station work. For this purpose a herd of typical dairy cows and a well equipped creamery are maintained. Many problems of vital interest to practical dairymen are constantly being worked out along the lines of rations for cows and methods for handling the herd. The student himself frequently assists in the work and thus obtains tangible evidence of the practical utility of the sciences in dairy husbandry.

The horticultural work of the station affords the student an admirable opportunity for comparing the work of the class room with the practices of the field. Plant breeding, cross pollination of fruits, as well as modern methods of planting, pruning, grafting, spraying and cultivation are all brought immediately under the observation of the student, thus affording him an excellent opportunity to become thoroughly conversant with the science and practice of horticulture.

SHORT COURSE.

This course is designed to meet the requirements of a large number of men and women in the state who have not the time or the means to take a full college course, and yet are desirous of obtaining a better equipment for their life-work than they now possess.

The course is given in the winter, for at this season the time can be better spared from the farm and orchard than at any other period. While the time will be subject to change to fit the regular college work, yet the course will be arranged to begin about the second week in January of each year, and extend over a period of from four to six weeks.

No special preparation is necessary as the instruction will be given by lectures and laboratory work. No examination is required to enter the course and no textbooks are used. It is the aim of this course to give to the student the largest possible amount of practical information regarding the various phases of agriculture and horticulture. Special attention is given to practical dairying.

The institution is well equipped for work in these lines. Laboratories, dairy building, green houses, and farm, all afford efficient means for illustration and work.

In addition to the course outlined, there are provided special lectures by practical men who have achieved success in some particular branch of agriculture or horticulture, or some other important industry of the state. These special lectures are provided without extra cost to the student, and are highly instructive and beneficial.

No tuition fee will be charged in this course. Those who attend will be expected to secure boarding places in the city or in the boarding halls of the college, provided the latter are not fully occupied by regular college students. Board and rooms can be had at \$2.50 to \$3.00 per week.

Reduced fare on all railroads in the state will be secured for those who attend this course.

For further information regarding this course application should be made to the president of the institution, or to the director.

FARMERS' INSTITUTES.

One of the most useful methods of diffusing agricultural education is the farmers' institute. These institutes are especially helpful both to the farmer and the experiment station worker. The former secures scientific information upon topics of immediate interest to him and is instructed in its practical application to the farm; while the latter is brought to realize more vividly the needs and perplexities of the farmer. It is gratifying to note the growing demand for more of these institutes, and while the station is ever ready to accede to these demands, it is, however, becoming annually more difficult on the part of the station officials to fulfill these obligations, owing to the constant increase in the work of the station.

LIBRARY.

LEWIS WARREN OREN, B. M. E., Librarian.

The library occupies a large, well-lighted room on the first floor of the administration building, and contains nearly 3000 bound volumes of standard works on history, literature, arts, sciences, general subjects and fiction; as many more bound volumes of U. S. government publications and about 5000 pamphlets and bulletins. Care has been exercised in the selection of books in order that each department may have proper works of reference at the disposal of the student.

A card catalogue is used and the books are indexed according to subject by the decimal system, and alphabetically according to title and author, so that the use of the library is greatly facilitated and its resources upon any subject easily ascertained.

The library receives the leading literary and scientific magazines and journals, all of which are kept on file.

The library is open for the issuing of books every school-day from 8 a. m. to 5 p. m., and during that time the librarian is in constant attendance. Books, excepting cyclopedias and works of general reference, may be drawn out by students for a period not exceeding two weeks.

LIST OF STUDENTS.

GRADUATES.

NAME.	†POSTOFFICE.	COUNTY.
Danneman, Carrie.....	Clem	Gilliam.
Finley, Ross Cauthorn.....	Baker City.....	Baker,
Getty, Fanny.....	Empire	Coos.
Holden, Hulda.....	Oregon City.....	Clackamas.
Jones, Mary.....	Corvallis.....	Benton.
Kyle, Ethel.....	Norton	Lincoln.
Morrison, Archibald David.....	Joseph.....	Wallowa.
Smith, Bessie Gertrude.....	Lincoln	Polk.
Withycombe, Mabel.....	Hillsboro.....	Washington.
Withycombe, Robert.....	Hillsboro.....	Washington.

SENIORS.

NAMES.	COURSE.	POSTOFFICE.	COUNTY.
Allen, Ina Pearl.....	H. S.	Amity	Yamhill.
Alspaugh, Augustus Marshall	Elec.	Currinsville.....	Clackamas.
Belknap, Frances Edna.....	H. S.	Corvallis	Benton.
Bilyeu, Thomas.....	Mech.	Athena	Umatilla.
Billings, Ralph	Agri.	Ashland.....	Jackson.
Bridgess, Marion Forrest.....	Elec.	Portland.....	Multnomah.
Davis, Eugene Harold.	Elec.	Yaquina.....	Lincoln.
Ewing, Gertrude Elizabeth...	H. S.	Fulton	Multnomah.
*Fruit, Dick Alec.....	Mech.	Peoria.....	Linn.
Garret, Rena Jane.....	H. S.	Philomath.....	Benton.
Hanley, Wilfred Edmond.....	Agri.	Hillsboro.....	Washington.
Houston, Fred Chancey.....	Agri.	Springfield.....	Lane.
Howard, Edith Slayton.....	H. S.	Prineville	Crook.
Howard, Roy Raymond.....	Mech.	Prineville.....	Crook.
Kurtichanof, Leonard.....	Elec.	Chitwood.....	Lincoln.
Laughlin, Chester Willis .. .	Mech.	North Yamhill..	Yamhill.
Leadbetter, Noble William...	Mech.	Corvallis.....	Benton.
Lusted, Harry Linden.....	Mech.	Troutdale.....	Multnomah.
MacLean, Kirby A. H. D. ...	Mech.	Vancouver.....	Wash. State.
Mattley, Leroy Garfield.	Agri.	Lewisville.....	Polk.
Mattley, Maud.....	H. S.	Lewisville	Polk.
McGillivray, Alexander E....	Phar.	Shaw	Marion.
Miner, Christal.	H. S.	Buena Vista.....	Polk.
Rosendorf, Edward	Phar.	Independence...	Polk.

† Address before coming to Corvallis for school purposes.

* Deceased.

Scott, James Franklin.....	Elec.	Shedd.....	Linn.
Sharp, Walter Lindsey.....	Elec.	Tangent... ..	Linn.
Small, Malinda Alice.....	H. S.	Silver Lake.....	Lake.
Smith, Ethel Florence.....	Phar.	Salem.....	Marion.
Smith, John Eliphalet.....	Agri.	Amity.....	Polk.
Spencer, Victor Cleveland... ..	Phar.	Corvallis.....	Benton.
Steiwer, Fred.....	Mech.	Jefferson.....	Marion.
St. Germain, Elizabeth Ney...	H. S.	Corvallis.....	Benton.
Sturgeon, Maude... ..	Phar.	Tillamook.....	Tillamook.
Tartar, Herman Vance... ..	Agri.	Airlie.....	Polk.
Thompson, George Harris.....	Agri.	Macleay.....	Marion.
Thompson, Orla.....	H. S.	Macleay.....	Marion.
Tulley, Arthur Edgar.....	Agri.	Wallowa.....	Wallowa.
Van Groos, William.....	Agri.	Turner.....	Marion.

JUNIORS.

NAMES.	COURSE.	POSTOFFICE.	COUNTY.
Abbe, Mabel Maud	H. S.	Nashville.....	Lincoln.
Anderson, Claudia Leola.....	H. S.	Lents.....	Multnomah.
Applegate, Rachel Lindsay...	H. S.	Yoncalla	Douglas.
Beaty, Edward Benjamin.....	Elec.	Walkerton.....	Indiana.
Berthold, Edith Jane..	H. S.	Oakville.. ..	Linn.
Bogue, Floyd Ellis.....	Mech.	Corvallis	Benton.
Burnaugh, Samuel Lewie.....	Phar.	Elgin.....	Union.
Canfield, Elsie May.....	H. S.	La Fayette.....	Yamhill.
Chipman, Laura Lillian.....	H. S.	Tillamook.....	Tillamook.
Chipman, Rosamond Leolene	H. S.	Tillamook.....	Tillamook.
Cockerel, Mortimer Jay	Phar.	Oregon City.....	Clackamas.
Dyer, Edward Leverett.....	Mech.	Albany.....	Linn.
Finley, Ada Eudora.....	H. S.	Corvallis	Benton.
Harden, Beulah Bethsheba....	H. S.	Stayton.....	Marion.
Hirstel, Dave.....	Elec.	Portland.....	Multnomah.
Jamieson, William Daniel...	Elec.	Raleigh.....	Washington.
Johnson, John Edwin.....	Agri.	Vale.....	Malheur.
Johnson, Lillian.....	H. S.	Vale	Malheur.
Johnson, Viola Ethel.....	H. S.	Vale	Malheur.
Linville, Ethel Elenor.....	H. S.	Corvallis	Benton.
Mayfield, Byram.....	Phar.	Elgin.....	Union.
Millhollen, Lloyd Francis....	Phar.	Oakville	Linn.
Pugh, Harvey Garfield.	Elec.	Shedd	Linn.
Rinehart, Jackson Carle.	Elec.	The Dalles.....	Wasco.
Smith, Minnie Grace.....	Agri.	Latourell Falls, Multnomah.	
Smith, Ida Mae.....	H. S.	Salem.....	Marion.
St. Germain, Inez.....	H. S.	Corvallis	Benton.
Underwood, Irving Melville..	Mech.	Sherar's Bridge.	Wasco.
Whiteman, Grace.....	H. S.	Jefferson.....	Marion.
Wells, Walter Stanley.. ..	Phar.	Corvallis	Benton.

SOPHOMORES.

NAME.	COURSE.	POSTOFFICE.	COUNTY.
Baxter, Elmer Elbert.....	Mech.	Dayton.....	Yamhill.
Belknap, Arthur Edward.....	Mech.	Corvallis.....	Benton.
Bower, Albert Burton.....	Mech.	Silverton	Marion.
Buchanan, Claud.....	Agri.	Corvallis.....	Benton.
Burns, John Charles.....	Agri.	Rockwood.....	Multnomah.
Buster, John William.....	Phar.	Sheridan	Yamhill.
Byerlee, Carrie Ann.....	H. S.	Hood River.....	Wasco.
Carnahan, Frank.....	Agri.	Astoria.....	Clatsop.
Cate, Claude Clifton.....	Agri.	Lenox.....	Washington.
Chambers, James Ralph.....	Mech.	King's Valley..	Benton.
Clark, Percy Elmo.....	Phar.	San Francisco, Calif.	
Cochran, Maud Elizabeth.....	H. S.	Needy.....	Clackamas.
Crume, George W.....	Mech.	Shedd	Linn.
Cummings, Carroll Elwood...	Agri.	Shaw	Marion.
Cummings, Sibyl Alice.....	H. S.	Shaw	Marion.
Cupper, Percy Alfred.....	Mech.	Monument	Grant.
Davidson, Barton Green.....	Mech.	Hood River.....	Wasco.
Dempsey, Fred Marion.....	Phar.	Portland.....	Multnomah.
Dickey, Walter Thompson.....	Mech.	Hood River	Wasco.
Dilley, Lucy Araminta.....	H. S.	Wren	Benton.
Dunlap, William James.....	Mech.	Shedd.	Linn.
Espy, Thomas Wilard.....	Min.	Oysterville	Wash. State.
Fowells, Margaret Belle.....	H. S.	Fayette,	Iowa.
Fryer, Harry Lee.....	Mech.	Carlton.....	Yamhill.
Fuller, Clara Etta.....	H. S.	Corvallis.....	Benton.
Gault, John Homan.....	Mech.	Salem.....	Marion.
Hagelstein, Henry.....	Mech.	Marshfield	Coos.
Hall, Albert Sidney.....	Mech.	Cleone.....	Multnomah.
Hartley, Warren Benson.....	Min.	Bohemia.....	Lane.
Hartley, Sophie Marguerite...	H. S.	Bohemia.....	Lane.
Harden, Delbert Leightner...	Mech.	Stayton.....	Marion.
Henkle, Joseph Clare.....	Mech.	Corvallis	Benton.
Hinrichs, Ernest.....	Mech.	Hood River.....	Wasco.
Herbert, Violet Philendia.....	H. S.	Corvallis.....	Benton.
Hershner, Edna Blanche.....	Phar.	Corvallis.....	Benton.
Horton, Walter Ralph.....	Mech.	Bridal Veil.....	Multnomah.
Horning, Alice Odalite.....	H. S.	Silver Lake.....	Lake.
Howard, John Ransom.....	Agri.	Prineville.....	Crook.
Hunsaker, Ethel Lenore.....	H. S.	Turner	Marion.
Ingram, Rose Mildred	H. S.	Monroe.....	Benton.
Irvine, Gertrude Edna.....	H. S.	Corvallis	Benton.
Jenks, Enoch Marion.....	Agri.	Tangent	Linn.
Junkin, James Blaine.....	Agri.	Oakville.....	Linn.
Keady, Mabel Bee.....	H. S.	Corvallis	Benton.

Leighton, Harry Milton.....	Agri.	Portland	Multnomah.
Lewis, Cecil Howell.....	Mech.	Astoria	Clatsop.
Little, David Charles.....	Mech.	Houlton	Columbia.
MacLean, Charles Edward....	Min.	Vancouver.....	Wash. State.
Mann, Smith James.....	Phar.	Roseburg	Douglas.
Marsh, Maude Ethel.....	H. S.	Centerville.....	Washington.
Mattley, Belle Kate.....	H. S.	Lewisville.....	Polk.
McGhee, Clyde Harold.....	Mech.	Albany	Linn.
Meiser, Martin McClure.....	Mech.	Albany	Linn.
Michael, Effie Laura.....	H. S.	Lebanon	Linn.
Moore, Guy Erwin.....	Agri.	Prineville.....	Crook.
Pate, Frank Caleb.....	Agri.	Jefferson.....	Marion.
Pate, Nellie Lillian.....	H. S.	Jefferson.....	Marion.
Paulson, Joseph.....	Mech.	University Park.....	Multnomah.
Proebstel, Chester Lloyd.....	Min.	Portland.....	Multnomah.
Rinehart, Harvey Earle.....	Agri.	The Dalles.....	Wasco.
Rusk, Alyce Leena.....	Phar.	Milwaukie	Clackamas.
Scott, Teroah Winfield.....	Phar.	Carson	Wash. State.
Shepard, Claiborne Lockley..	Agri.	Salem.....	Marion.
Skelton, Nellie Vernon.....	H. S.	Mt. Vernon.....	Wash. State.
Smith, Benjamin Trueblood...	Agri.	Salem.....	Marion.
Smith, Ray Marie.....	H. S.	Salem.....	Marion.
Staats, Vivian Cecil.....	Agri.	Airline.....	Polk.
Starr, Artie.....	Mech.	Monroe.....	Benton.
Steiwer, Helen.....	H. S.	Jefferson.....	Marion.
Sutherland, Mary Elizabeth...	H. S.	Shedd	Linn.
Sweek, John Matthew.....	Agri.	Burns.....	Harney.
Tartar, Lena Belle.....	H. S.	Airline.....	Polk.
Tedrow, Albert Edward.....	Agri.	Monmouth	Polk.
Wann, Erwin Fred.....	Mech.	Waldport	Lincoln.
Weber, Otto Adam.....	Phar.	Corvallis.....	Benton.
Weeks, Wilbur.....	Agri.	Salem.....	Marion.
Wells, Albert Sidney.....	Min.	Portland	Multnomah.
Whitby, Isabel Harris.....	H. S.	Corvallis.....	Benton.
Whitney, Ira Parker.....	Agri.	Chitwood	Lincoln.
Wicklund, Elmer Gifford.....	Agri.	Va'e.....	Malheur.
Wilson, Bushrod Washington	Mech.	Corvallis	Benton.
Yates, Elbert William.....	Agri.	Corvallis.....	Benton.
Zurcher, James Drummond...	Mech.	Enterprise.....	Wallowa.

FRESHMEN.

NAME.	COURSE.	POSTOFFICE.	COUNTY.
Abraham, William Gustave...	Mech.	Granger.....	Benton.
Abrams, Chester Witten.....	Mech.	Lincoln.....	Polk
Adams, Percival Lysander.....	Mech.	Hood River	Wasco.
Adamson, Albert Wilbert.....	Phar.	Rowland.....	Linn.

Airth, Henry Allen.....	Mech.	Astoria.....	Clatsop.
Alexander, Ethel May.....	H. S.	Corvallis.....	Benton.
Alexander, Alice Mary.....	L. C.	Corvallis.....	Benton.
Alspaugh, Willie Emma.....	H. S.	Eagle Creek.....	Clackamas.
Alspaugh, John Wesley.....	Mech.	Eagle Creek.....	Clackamas.
Alspaugh, Ernest Lawrence ..	Mech.	Eagle Creek.....	Clackamas.
Allingham, Ralph.....	Agri.	Shedd.....	Linn.
Allen Thomas Jefferson.....	L. C.	Kings Valley ..	Benton.
Anderson, George Anthon.....	Mech.	Harrisburg	Linn.
Andrews, Henry Villard.....	Agri.	Mount Tabor ..	Multnomah.
Applegate, Eva.....	H. S.	Yoncalla.....	Douglas.
Applegate, Evea.....	H. S.	Yoncalla.....	Douglas.
Applegate, Avery.....	Agri.	Tillamook.....	Tillamook.
Bates, Allen Thomas.....	Phar.	La Fayette.....	Yamhill.
Bates, Howard Wilson.....	Mech.	Portland	Multnomah.
Baker, Ralph Ernest.....	Mech.	Cleveland	Wash. State.
Ban, Rocks.....	Agri.	Tokio.....	Japan.
Bareinger, Ada Lucetta.....	L. C.	Fern.....	Benton.
Berman, Ethel Alberta.....	H. S.	Corvallis.....	Benton.
Belden, Miles Bebee.....	Min.	Cove.....	Union.
Bilyeu, Hamon Shelley.....	L. C.	Athena	Umatilla.
Boorman, Mabelle Hazel	H. S.	Hood River.....	Wasco.
Boyd, James Edward.....	Mech.	Halsey.....	Linn.
Boyd, William Willis.....	Mech.	Halsey.....	Linn.
Brooke, Ethel Amelia.....	H. S.	Crestin	Iowa.
Brumfield, Olive Maude.....	H. S.	Toledo.....	Lincoln.
Brandon, Hugh Franklin.....	Phar.	Halsey	Linn.
Brock, Roy Cecil.....	Phar.	Wasco.....	Sherman.
Bryant, Albert Melvin	Phar.	Heppner	Morrow.
Brigham, George Chase	Agri.	Portland	Multnomah.
Buxton, Maud	H. S.	Forest Grove....	Washington.
Bunn, Wilbur Ray.....	Mech.	North Yamhill..	Yamhill.
Burnaugh, Andrew Jackson...	L. C.	Elgin.....	Union.
Cady, Ray Bruce	Agri.	Holbrook	Nebraska.
Cathey, George Andrew.....	Phar.	Woodburn.....	Marion.
Canfield, Kathleen Mavoureen	L. C.	La Fayette.....	Yamhill.
Carlson, John Will.....	Mech.	Portland	Multnomah.
Carter, Etta Belle.....	L. C.	Halsey	Linn.
Castle, Mac.....	Mech.	Saginaw	Lane.
Cate, Rufus Henry.....	Mech.	Portland	Multnomah.
Cecil, James Carrol.....	Agri.	Burns	Harney.
Chapman, William Frederick	Phar.	Roseburg.....	Douglas.
Clark, Jesse Claude	Agri.	Newberg.....	Yamhill.
Colbert, Waldo Whitney	Phar.	Fayette.....	Iowa.
Colbert, Wallace Welcome....	Phar.	Fayette.....	Iowa.
Connor, Charles.....	Mech.	Ione.....	Morrow.
Cooper, James Abraham.....	L. C.	Corvallis.	Benton.
Cumming, Walter Griffin.....	Mech.	Hilgard.....	Union.

Daniel, Kathryn Blanche	Phar.	Grants Pass.....	Josephine.
Darby, Henry Clay	Phar.	Lewisburg	Marion.
Davidson, Ralph Leonard	Mech.	Independence.....	Polk.
Davis, Floyd Bushnell.....	Mech.	Yaquina	Lincoln.
Day, Fred Raymond	Agri.	Yoncalla.....	Douglas.
Day, Robert George.....	Agri.	Lake.....	South Dakota.
Danneman, Mary Cecil.....	L. C.	Clem.....	Gilliam.
Davis, Zella May.....	L. C.	Shedd	Linn.
DeHaven, Clara Myrtle.....	H. S.	Peoria.....	Linn.
Dixon, Sadie Madge.....	L. C.	Yaquina	Lincoln.
Driver, Thomas Franklin.....	L. C.	Warnic	Wasco.
Dukes, Maltie.....	Phar.	Hood River.....	Wasco.
Dunlap, Mary Iva.....	Phar.	Shedd.	Linn.
Edwards, Ernest Lee.....	L. C.	Junction.....	Lane.
Eddy, Earnest.....	L. C.	Kings Valley.....	Benton.
Elgin, Sophie Dell	H. S.	Suver.....	Polk.
Elgin, Benjamin Franklin.....	Phar.	Suver.....	Polk.
Emily, Joel.....	Mech.	Hurlburt.....	Multnomah.
Engle, Clyde.....	L. C.	Molalla.....	Clackamas.
Evans, Harry Benton.....	Mech.	Estrup.....	Lane.
Fawk, Seth Lee.....	Mech.	Rickreall..	Polk.
Ferguson, Hope.....	L. C.	Astoria.....	Clatsop.
Finley, Percy Marvin ..	Agri.	Corvallis	Benton.
Fischer, Fred Solomon.....	L. C.	Corvallis	Benton.
Flemming, Alice Anna ..	H. S.	Newport.....	Lincoln.
Fowells, Frank La Verne	Mech.	Fayette	Iowa.
Fox, Josiah Thomas.....	L. C.	Halsey	Linn.
French, Margaret Isabel.....	H. S.	Corvallis.....	Benton.
Fulton, Annettie.....	H. S.	La Fayette	Yamhill.
Galloway, Frank Asberry.....	L. C.	Elgin	Union.
Garfield, Eunice Evelyn.....	H. S.	Oswego	Clackamas.
Gardiner, Clifford Le Mont...	Min.	Astoria.....	Clatsop.
Garrow, Theodore Alexander	Mech.	Oregon City	Clackamas.
Gellatly, David Neal	L. C.	Philomath.....	Benton.
Gellatly, Frances Violet.....	L. C.	Philomath.....	Benton.
Gerking, Albert David.....	Agri.	Stayton.....	Marion.
Gibson, Thomas Masson	Min.	Chemainus.....	B. C.
Glassford, Nell Loris.....	L. C.	Kings Valley.....	Benton.
Goldson, George William.....	L. C.	Goldson.....	Lane.
Graham, Dona'd Hamilton...	Mech.	San Antonio.....	Texas.
Graham, John Maxfield.....	L. C.	Kings Valley.....	Benton.
Groshong, Fred Monroe.....	Agri.	Hoskins	Benton.
Haberlach, William Fred.....	Agri.	Clackamas	Clackamas.
Haenel, Otto Anthony	Mech.	Monroe.....	Benton.
Hale, Claude.....	L. C.	Brownsville.....	Linn.
Hall, Frank Edward	Min.	Payn	Clackamas.
Harlan, Le Roy,.....	L. C.	Republican Cy .	Nebraska.
Hays, Maggie Maude.....	H. S.	Tangent....	Linn.

Healy, Leonard Bert	Phar.	Sodaville.....	Linn.
Henry, Worth Wellington.....	L. C.	Zena	Polk.
Herbert, Georgia Ellen	H. S.	Corvallis.....	Benton.
Hills, Fred Austin.....	Agri.	Jasper.....	Lane.
Hinrichs, Max.....	Mech.	Hood River	Wasco.
Holt, Nellie Eudora.....	H. S.	Thomas.....	Lincoln.
Horton, Alva Otis.....	Phiar.	Bridal Veil.....	Multnomah.
Hunsaker, Alice Cressie.....	L. C.	Turner	Marion.
Hussey, Alvaro Staples.....	Phiar.	Turner	Marion.
Jackson, Elmer Polic.....	Mech.	Cleone	Multnomah.
Jackson, John Alexander.....	L. C.	Astoria	Clatsop.
Jolly Mary Grace	L. C.	Philomath.....	Benton.
Jones, William Robert.....	L. C.	Suver.....	Polk.
Jones, Alice Elizabeth.....	H. S.	Corvallis.....	Benton.
Jordan, Bert Trew.....	Phar.	Albany	Linn.
Junkin, Jonathan Bunyan.....	Min.	Oakville... ..	Linn.
Kiger, Effie Ina.....	H. S.	Blodgett.....	Benton.
King, Amos Edward... ..	Mech.	Portland	Multnomah.
Kinder, Dock Frank.....	Mech.	Dayton.....	Wash. State.
Kissling, William John.....	Agri.	Macleay.....	Marion.
Koerner, Martha.....	H. S.	Oregon City.....	Clackamas.
Larson, Fred.....	Mech.	Astoria.....	Clatsop.
Laughlin, Harley Wade.....	Min.	La Grande.....	Union.
Leckenby, Mary Ellen	H. S.	Union	Union.
Lemery, Albert William.....	L. C.	Gervais.....	Marion.
Lindgren, Dora Matilda.....	L. C.	Marion	Marion.
Lockwood, Claude McLean... ..	Phar.	Wallowa.....	Wallowa.
Locke, Elsie Evelyn.....	L. C.	Corvallis	Benton.
Lokan, August.....	Mech.	Astoria.....	Clatsop.
Lyon, Charles Donahue	Mech.	Medford.....	Jackson.
Mack, Lawrence Wallace.....	Mech.	Ely.....	Clackamas.
Madden, Estella Mary	H. S.	McMinnville....	Yamhill.
Martin, Weaver Thomas.....	Mech.	McMinnville....	Yamhill.
McAllister, Reese Moe.....	Agri.	La Grande....	Union.
McAllister, Charles.....	Min.	Enterprise.....	Wallowa.
McCallister, Mark David.....	Mech.	Pratum.....	Marion.
McCormick, John Roderick... ..	Mech.	Lebanon	Linn.
McCall, Edward Roy.....	Phar.	Gresham	Multnomah.
McGillivray, Eliza Kate... ..	L. C.	Shaw.....	Marion.
McKinney, Ray Lewis.....	Phar.	Medford.....	Jackson.
McTimmmonds, James Vet.....	Min.	Airlie.....	Polk.
Meeker, Lenna Louise	H. S.	Laurel.....	Nebraska.
Messinger, Charlie Hosea.....	L. C.	Mosmouth.....	Polk.
Miller, Curtis Harry.....	L. C.	Kings Valley ...	Benton.
Montgomery, Edith Ellen.....	H. S.	Falls City.....	Polk.
Moore, Guy Sherwood... ..	Mech.	Albany.....	Linn.
Moore, Merrill Bruce.. ..	Mech.	Oregon City.....	Clackamas.
Morgan, Roy	Mech.	Coquille.....	Coos.

Morgan, Clyde Willis.....	L. C. Halsey.....	Linn.
Morris, Charles William.....	Agri. Fossil.....	Wheeler.
Mossie, Eber David.....	Mech. Ukiah.....	Umatilla.
Mossie, Rosa Celestine.....	Phar. Ukiah.....	Umatilla.
Mulkey, Chester Loren.....	Phar. Amity.....	Yamhill.
Nash, Roderick Nicholson....	Agri. Nashville.....	Lincoln.
Newsom, Abraham.....	Phar. Salem.....	Marion.
Newhouse, Lulu Alberta.....	L. C. Corvallis.....	Benton.
Nicholson, Lemuel Bradford.	Mech. Harrisburg.....	Linn.
Osborne, Edna Marie.....	H. S. Corvallis.....	Benton.
Pasley, Wallace Hubert.....	Mech. Glencoe.....	Washington.
Patton, Letha Margaret.....	L. C. Halsey.....	Linn.
Pauldanius, Louis Albert.....	L. C. Astoria.....	Clatsop.
Pelland, Fred Joseph.....	Mech. St Paul.....	Marion.
Pepin, Arthur James.....	Min. Clitwood.....	Lincoln.
Post, Ames Alfred.....	Mech. Dayton.....	Yamhill.
Price, Ethel.....	H. S. Kings Valley.....	Benton.
Raber, Hazel Blanche.....	H. S. Corvallis.....	Benton.
Ramsey, Oliver Perry.....	Mech. Portland.....	Multnomah.
Randall, Will Amos.....	Mech. Portland.....	Multnomah.
Rawson, Earl.....	Mech. Hockinson.....	Wash. State.
Rich, Arthur James.....	Mech. Astoria.....	Clatsop.
Rice, Sarah Elizabeth.....	H. S. Clear Lake.....	Iowa.
Rice, Lulu Ruth.....	H. S. Clear Lake.....	Iowa.
Rickard, Thella Blanche.....	L. C. Inavale.....	Benton.
Ringo, Joseph Lucine.....	Mech. Molalla.....	Clackamas.
Roberts, Lucile Jean.....	H. S. Hood River.....	Wasco.
Robinson, George Graves.....	L. C. Corvallis.....	Benton.
Rose, Pearl Lemuel.....	Mech. Airlie.....	Polk.
Rosendorf, Juanita.....	L. C. Independence.....	Polk.
Rusk, Herbert Ruel.....	Mech. Milwaukie.....	Clackamas.
Rutherford, William Robert..	Phar. Burns.....	Harney.
Salvon, Henry.....	Phar. Astoria.....	Clatsop.
Scherneckau, Chas August....	L. C. Astoria.....	Clatsop.
Schoel, Louis.....	Mech. Halsey.....	Linn.
Schoel, William Amile.....	Mech. Halsey.....	Linn.
Schrack, Charles Vernon.....	Agri. Oakville.....	Linn.
Schrack, Claud.....	Agri. Oakville.....	Linn.
Sears, Gladys Winona.....	H. S. Hood River.....	Wasco.
Sears, George Ralph.....	Agri. Walker.....	Lane.
Shearer, Caroline Hamilton...	L. C. Oakville.....	Linn.
Short, Dudley Elshman.....	Agri. Goldendale.....	Wash. State.
Short, Clarence Washington..	Mech. Goldendale.....	Wash. State.
Simeral, Raymond Wilton....	Agri. Macleay.....	Marion.
Simpson, Otto Gerald.....	Agri. Suver.....	Polk.
Simpson, Margaret Merle.....	H. S. Corvallis.....	Benton.
Small, Laura Mae.....	H. S. Silver Lake.....	Lake.
Smith, Edna Louisa.....	Phar. Latourell.....	Multnomah.

Smith, Will Tyler	Phar.	Sheridan	Yamhill.
Smith, Orrice Ray.....	Min.	Gates.....	Marion.
Smith, Guy Odell.....	L. C.	Zena.....	Polk.
Sommer, Marguerite.....	H. S.	Scio.....	Linn.
Sorenson, Bernard Fred.....	Mech.	Harrisburg	Linn.
Soule, Ira Garfield.....	Mech.	Lacomb	Linn.
Staats, Eva Clara ...	H. S.	Airlie.....	Polk.
Staats, Roscoe Conklin	L. C.	Airlie.....	Polk.
Starr, Mamie Calla Luda	L. C.	Monroe	Benton.
Steiber, Karl.....	Agri.	Jefferson	Marion.
Stimpson, May.....	H. S.	Newport	Lincoln.
Stinson, Frederick Charles...	Phar.	Amity.....	Yamhill.
Stokes, Francis Marion.....	Min.	Portland	Multnomah.
Stott, Robert	Phar.	Pendleton.....	Umatilla.
Stout, Ray Lewis	Mech.	Melama.....	Marion.
Strong, Frank Edward.....	Mech.	Newberg	Washington.
Swann, Claud Vivian	Mech.	Buena Vista.....	Polk.
Sweek, Earl.....	Agri.	Burns.....	Harney.
Sweek, Agnes.....	H. S.	Burns.....	Harney.
Tannock, John Smith.....	Mech.	Lenox.....	Washington.
Taylor, Vance Alexander.....	Mech.	Shedd.....	Linn.
Taylor, Byron James	L. C.	Corvallis	Benton.
Telfer, Grace Marie	Phar.	Portland.....	Multnomah.
Thompson, Ethel Maud.....	H. S.	Macleay.....	Marion.
Thompson, Ralph Infield.....	Mech.	Heppner.....	Morrow.
Thrift, Douglas Palmer.....	Agri.	Shedd.....	Linn.
Tulley, Elmer Jesse	Agri.	Wallowa	Wallowa.
Tuttle, Gera'd	Phar.	Summerville ..	Union.
Underwood, William Dean....	Mech.	Boyd	Wasco.
Wade, Walter Eakin.....	Mech.	Summerville....	Union.
Wallace, Earl Wayne	Mech.	Hillsboro.....	Washington.
Ward, Deibert Milton.....	L. C.	Lone Rock	Gilliam.
Watkins, Harvey Hay.....	Agri.	Portland	Multnomah.
Webber, Ward Perry.....	Min.	Medford.....	Jackson.
Weber, Leona Charlotte.....	Phar.	Corvallis	Benton.
Wel's, Perry Edward.....	L. C.	Hood River....	Wasco.
Wicks, Florence	H. S.	Oakville.....	Linn.
Wicklund, Alice Minerva.....	L. C.	Boise	Idaho.
Wilkes, Marion.....	Mech.	Hillsboro... ..	Washington.
Williams, Floyd Alexander...	Agri.	Airlie.....	Polk.
Wills, Elmer Edward	L. C.	Heppner.....	Morrow.
Wilson, Clarence Presley.....	L. C.	Corvallis	Benton.
Wilson, Arthur Hubert.....	L. C.	Halsey.....	Linn.
Wimer, Roswell Edward.....	L. C.	Salem.....	Marion.
Winters, George Chester.....	Agri.	Ballston.....	Polk.
Withycombe, John.....	Mech.	Portland.....	Multnomah.
Witty, John Thomas.....	Phar.	Elgin	Union.
Woodcock, Harold Clyde.....	Mech.	Corvallis.....	Benton.

Yates, Bessie.....	H. S. Corvallis.....	Benton.
Yeager, Myra Frances.....	H. S. Heppner	Morrow.
Wyatt, Minnie Myrtle.....	L. C. Corvallis.....	Benton.

SUB-FRESHMEN.

NAME.	POSTOFFICE.	COUNTY.
Allen, Jasper Ebet	Junction.....	Lane.
Bagley, Fred William.....	Paisley.....	Lake
Benson, Clifford Stuart.....	Roseburg.....	Douglas.
Beach, Henry Thomas.....	Glencoe	Washington.
Brians, Forrest.....	Heppner	Morrow.
Brians, Harry Harland	Heppner	Morrow.
Buster, Edna Volevia.....	Sheridan.....	Yamhill.
Cecil, Homer David.....	Riley.....	Harney.
Cochran, Vivian Armel.....	Salem... ..	Marion.
Cummings, Henry Manning.....	Hilgard.....	Union.
Dailey, William Rufus	Sulphur Springs.....	Douglas.
Dodson, George Julius.....	Albany.....	Linn.
Draper, Ridgely Rupert.....	Prineville.....	Crook.
Erb, John Cyrus	Hubbard.....	Marion.
Fuller, Julia Ella	Corvallis	Benton.
Grimes, Vincent Charles	Harrisburg.....	Linn.
Harrington, Gretta.....	Corvallis.....	Benton.
Harrington, Myrtie Edith.....	Corvallis.....	Benton.
Haines, Chaffie Davisson	Eckley	Curry.
Hawley, Earl Vincent.....	Monroe.....	Benton.
Herron, Margaret.....	Bruce.....	Benton.
Jackson, Frank Wesley.....	Glencoe.....	Washington
Kraus, Arthur William	Aurora.....	Marion.
Lyon, James William.....	Medford.....	Jackson.
MacKenzie, James.....	Newberg.....	Yamhill.
Mespelt, Charles Casper.....	Scio.....	Linn.
Milner, Moses Embree	Buena Vista.....	Polk.
Moore, Clarence.....	Albany.....	Linn.
Porterfield, Ralph Erastus.....	Independence.....	Polk.
Reddaway, Fred Percy.....	Grass Valley.....	Sherman.
Rickard, Mark.....	Inavale.....	Benton.
Ritner, Frederick Charles.....	Kings Valley.....	Benton.
Starr, Miles Turner	Monroe.....	Benton.
Stokes, William Blanchard...	Oregon City.....	Clackamas.
Stringer, Louis Chancey.....	Lacomb	Linn.
Wells, John Edward	Buena Vista.....	Polk.
Wicklund, Clarence Price	Vale.....	Malheur.
Wilkinson, Claud.....	Junction City	Lane.

SPECIAL STUDENTS.

NAME.	POSTOFFICE.	COUNTY.
Alderson, Edith Ruth.....	Salem	Marion.
Applegate, Metta	Yoncalla.....	Douglas.
Bates, Elsie Anna.....	Shaw ..	Marion.
Campbell, Lura.....	Albany	Linn.
Cramer, Minnie.....	Corvallis.....	Benton.
Cronise, Mabel	Corvallis.....	Benton.
Curriu, Frances.....	Salem	Marion.
Curriu, Margaret Ellen.....	Corvallis.....	Benton.
Day, Elsie Cordelia.....	Jacksonville	Jackson.
Dolph, Mrs. Augusta.....	Portland.....	Multnomah.
Farra, Lester Franklin.....	New Market.....	Missouri.
Flett, Lura Lovene.....	Corvallis	Benton.
Geer, Bertrand Byron.....	Willard.....	Marrion.
Harder, Ralph Frederick.....	Melville	Clatsop.
Holmes, Samuel.....	Corvallis	Benton.
McCormick, Lena.....	Corvallis.....	Benton.
McFarland, Rova Elvira	Albany	Linn.
Noble, Jennie.....	Oregon City	Clackamas.
Olson, Kathryn.....	Catlin	Washington State.
Phillips, Edgar Warren	Portland	Multnomah.
Randall, Julia Mary.....	Corvallis	Benton.
Sanders, Karl.....	Baker City.....	Baker.
Stewart, Una Ellner.....	Prineville	Crook.
Thornton, Arthur Lee.....	Roseburg.....	Douglas.
Thompson, Roxana.....	Macleay	Marion.
Tohl, Herman John.....	Nehalem.....	Tillamook.
Webb, Mary Elizabeth	Portland.....	Multnomah.
Yates, Mrs. Lucy Wiles	Corvallis ...	Benton.

SPECIAL MUSIC STUDENTS.

NAME.	WORK.	POSTOFFICE.	COUNTY.
Allen, Thomas Jefferson...	C.	Kings Valley	Benton.
Applegate, Mitta.....	P.	Yoncalla.....	Douglas.
Applegate, Rachel	C.	Yoncalla	Douglas.
Bates, Elsie Anna.....	C, P, V, H.	Shaw	Marion.
Beaty, Edward Benjamin	C, H.	Walkerton	Indiana.
Belknap, Frances Edna	C.	Corvallis	Benton.
Bridgess, Marion Forrest	C, H.	Portland	Multnomah.
Burnaugh, Lewie	C.	Elgin	Union.
Buster, John William.....	C, P, H.	Sheridan	Yamhill.
Buster, Edna.....	C, P, V, H.	Sheridan	Yamhill.
Canfield, Kathleen.....	P.	La Fayette	Yamhill.
Cannahan, Frank	C, V, H.	Astoria	Clatsop.
Danneman, Carrie	V.	Clem	Gilliam.
Day, Elsie	P, V.	Jacksonville	Jackson.
Elgin, Sophie	C, V.	Suver	Polk.
Erwin, Cecil	P.	Corvallis	Benton.
Erwin, Ralph	P.	Corvallis	Benton.

Fischer, Martha	V.	Corvallis	Benton.
Finley, Ada Eudora	C.	Corvallis	Benton.
Geer, Bertrand Byron	C, P.	Willard	Marion.
Getty, Fannie	V.	Empire	Coos.
Gibson, Thomas Masson	P.	Chemanius	British Columbia.
Goldson, George William	C.	Goldson	Lane.
Groshong, Fred Monroe	C.	Hoskins	Benton.
Hanley, William	C.	Hillsboro	Washington.
Hall, Albert Sidney	C, H.	Cleone	Multnomah.
Hall, Frank Edward	C, H.	Payn	Clackamas.
Harden, Beulah	C.	Stayton	Marion.
Harrington, Greta	P.	Corvallis	Benton.
Haberlach, William Fred	P.	Clackamas	Clackamas.
Horner, Pearl Alicia	P.	Corvallis	Benton.
Horner, Vera Della	P.	Corvallis	Benton.
Howard, Edith	C.	Prineville	Crook.
Jones, Mary	P.	Corvallis	Benton.
Jones, William Robert	P, C, H.	Suver	Polk.
Jolly, Mary Grace	P.	Philomath	Benton.
Keady, Mabel Bee	C.	Salem	Marion.
Koerner, Martha	P.	Oregon City	Clackamas.
Laughlin, Chester Willis	C.	North Yamhill	Yamhill.
Leadbetter, Elizabeth	C, P.	Corvallis	Benton.
McGillivray, Eliza	C, V.	Shaw	Marion.
McCormick, Lena	V.	Corvallis	Benton.
Moores, Merrill Bruce	C.	Oregon City	Clackamas.
Moore, Guy	C.	Prineville	Crook.
Moore, Gladys	C, P, H.	Prineville	Crook.
Miller, Curtis	P.	Kings Valley	Benton.
Olsen, Kathryn	P.	Catlin	Washington State.
Osborn, Edna	C.	Corvallis	Benton.
Patten, Letha Margaret	P.	Halsey	Linn.
Paulson, Joseph	C.	University Park	Multnomah.
Rich, Arthur James	P.	Astoria	Clatsop.
Roberts, Lucile Jean	C, P, V.	Hood River	Wasco.
Rosendorf, Modesta	P.	Independence	Polk.
Raber, Hazel Blanche	C.	Corvallis	Benton.
Randall, Julia	P.	Corvallis	Benton.
Ritner, Frederick Charles	C.	Kings Valley	Benton.
Rusk, Alyce Lena	C, H, P.	Milwaukie	Clackamas.
Smith, Ray Marie	V, C.	Salem	Marion.
Smith, Benjamin	C.	Salem	Marion.
Smith, Edna	C, H.	Latourell	Multnomah.
Simpson, Margaret Merle	P, V.	Corvallis	Benton.
Short, Clarence	C, H.	Goldendale	Washington.
Shaw, William Thomas	C, V.	Corvallis	Benton.
Steiber, Helen	V.	Jefferson	Marion.
Stewart, Una Ellner	P.	Prineville	Crook.
Starr, Sylvia	P, V, C.	Monroe	Benton.
Starr, Mamie	C, H.	Monroe	Benton.
Sears, Gladys	C, P.	Hood River	Wasco.
Scott, Teroah Winfield	C.	Carson	Washington State.
Shepard, Claybourne	C.	Salem	Marion.
Skelton, Nellie	C.	Mount Vernon	Washington State.
Sturgeon, Maude	P.	Tillamook	Tillamook.
Spangler, Lulu	V.	Athena	Umatilla.
Thompson, Orla	V, C.	Macleay	Marion.
Thompson, Harris	C.	Macleay	Marion.
Thompson, Roxana	C, V, P, H.	Macleay	Marion.
Thompson, Ethel	C, H, V.	Macleay	Marion.
Tulley, Edgar Arthur	C.	Wallowa	Wallowa.
Telfer, Grace	P, V.	Portland	Multnomah.
Tedrow, Albert Edward	C.	Monmouth	Polk.
Tartar, Lena Belle	C, P, H.	Airlie	Polk.

RECAPITULATION.

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Tortora, Emma	P.	Corvallis	Benton.
Underwood, Irving M.	C.	Sherar Bridge	Wasco.
Witty, John Thomas	C.	Elgin	Union.
Withycombe, Mabel	P, V.	Hillsboro	Washington.
Wills, Elmer	P.	Heppner	Morrow.
Wilson, Cara	V.	Corvallis	Benton.
Wells, Albert Sidney	C.	Portland	Multnomah.
Woodcock, Mrs. M. S.	V.	Corvallis	Benton.
Webb, Mary Elizabeth	V. C.	Portland	Multnomah.
Yeager, Myra Frances	P.	Heppner	Morrow.
Yates, Elbert William	C.	Corvallis	Benton.
Yates, Bessie	C, H, V, P.	Corvallis	Benton.
Zurcher, James D.	C, V.	Enterprise	Wallowa.

NOTE.—In the above the following abbreviations occur: C., Choral Work; V., Voice Culture; P., Pianoforte; H., Harmony.

RECAPITULATION.

	Men	Women	Dept. Total	Class Total
GRADUATES	3	7		10
SENIORS—				
Mechanical	8		8	
Electrical	6		6	
Household Science		10	10	
Agricultural	9		9	
Pharmacy	3	2	5	
Total seniors				38
JUNIORS—				
Mechanical	3		3	
Electrical	5		5	
Household Science		15	15	
Pharmacy	5		5	
Agricultural	1	1	2	
Total juniors				30
SOPHOMORES—				
Mechanical	26		26	
Household Science		23	23	
Agricultural	21		21	
Pharmacy	6	2	8	
Mining (regular)	5		5	
Total sophomores				83
FRESHMEN—				
Mechanical	69		69	
Household Science		42	42	
Literary Commerce	36	22	58	
Agricultural	32		32	
Pharmacy	28	6	34	
Mining (regular)	9		9	
Mining (short course)	3		3	
Total freshmen				247
SPECIAL	8	20	28	28
SUB-FRESHMEN	33	5	38	38
MUSIC	33	61	94	
Students of this department enrolled with other classes				80
Students in music not enrolled with other classes	2	12	14	14
Total	321	167		488

Students Classified by Counties, States and Foreign Countries.

Baker	2	Lincoln	14
Benton	91	Linn	55
Clackamas	20	Malheur	5
Clatsop	13	Marion	48
Columbia	2	Morrow	7
Coos	3	Multnomah	34
Crook	6	Polk	34
Curry	1	Sherman	2
Douglas	10	Tillamook	5
Grant	1	Umatilla	6
Gilliam	3	Union	12
Harney	6	Wallowa	6
Jackson	7	Wheeler	1
Josephine	1	Wasco	13
Lake	4	Washington	14
Lane	11	Yamhill	19

Number of counties in Oregon	33
Total number of counties represented	32
Whole number of students from Oregon	459
California	1
Idaho	1
Indiana	1
Iowa	7
Missouri	1
Nebraska	3
South Dakota	1
Texas	1
Washington	11
British Columbia	1
Japan	1
Total	488

Comparative Statement of Enrollment.

Year.	Music, Special.	Prepar- atory.	Fresh- men.	Sopho- mores.	Juniors	Seniors	Grad- uate Stu- dents.	Special.	Total.
1888-1889.....		36	33	14	14	0	0	0	97
1889-1890.....		67	55	17	6	0	6	0	151
1890-1891.....		76	83	24	15	0	3	0	201
1891-1892.....		86	63	28	19	9	3	0	208
1892-1893.....		98	123	31	18	7	5	0	282
1893-1894.....		36	103	71	21	5	4	0	240
1894-1895.....		47	85	64	52	13	0	0	261
1895-1896.....		80	175	63	54	9	14	2	397
1896-1897.....		Sub-	157	80	29	17	11	25	319
1897-1898.....		Fresh-	151	75	45	26	15	24	336
1898-1899.....		men.	164	79	30	36	15	14	338
1899-1900.....		42	145	74	40	36	20	48	405
1900-1901.....		44	177	72	42	37	9	55	436
1901-1902.....	14	38	247	83	30	38	10	28	488

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